SYSTEMS THEORY, UNITY OF EFFORT, AND MILITARY LEADERSHIP

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This analysis reveals that complex systems theory suffuses how Rodriguez visualizes his mission to stabilize Afghanistan in cooperation with an international coalition of Unified Action partners. Also, I show how Rodriguez's understanding, descriptions, and interventions follow a systems approach characterized by complex stakeholder interactions, depicted by nodes and linkages. The implications for this research are significant for scholars, doctrine writers, and military leaders responsible for achieving national security objectives against hybrid threats and in cooperation with interagency, international, and host nation partners.

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ACRONYMS

ADP	Army Doctrine Publication
ADRP	Army Doctrine Reference Publication
ANA	Afghan National Army
ANP	Afghan National Police
ASCOPE	Area, Structures, Capabilities, Organizations, People, Events
COG	Center of Gravity
FM	Field Manual
IJC	International Security Assistance Force Joint Command
ISAF	International Security Assistance Force
JP	Joint Publication
PMESII-PT	Political, Military, Economic, Social, Infrastructure, Information
SoS	System of Systems
U.S.	United States

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CHAPTER 1

INTRODUCTION

I am a systems guy. I like to analyze our processes, identify the points of failure, and fix them.
— CGSC Student, 24 October 2012

God grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference.
— Reinhold Niebuhr, 1944

In full partnership, the combined team of Afghan National Security Forces, ISAF Joint Command and relevant organizations conducts population-centric comprehensive operations to neutralize the insurgency in specified areas, and supports improved governance and development in order to protect the Afghan people and provide a secure environment for sustainable peace
— International Security Assistance Force
Joint Command Mission Statement,
5 December 2012

Linear or Systems Thinking?

How do we think about the world in which we live? Is it an environment with

coexisting "complex" systems moving between instability and stability that intertwine,

overlap, and collide? Are these systems comprised of subsystems which include entities

with agency and/or networks of actors exhibiting cycles and patterns of behavior?

Perhaps we perceive our environment as a complicated system filled with complicated

subsystems and parts (nodes) having specific functions such that "the various elements

that make up the system maintain a large degree of independence from each other"

(Loode 2011). Possibly, we see ourselves as living in a simple world where we wake up,

go to work, and every action we observe or experience can be explained and controlled

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through direct causality–including human behavior. Or maybe, our experience of the world appears as a combination or progression of all of those three realities.[1]

How we understand and think about our environment matters. As illustrated, in complexity science, complex is not synonymous with complicated. As many generals like to say "words have meaning. Use them precisely." In the absence of an education that provides a lexicon and means of thinking about complexity (a framework), military professionals may articulate their understanding of observed environment using simple models that "tend to lead to simplified interpretations of the information in the more complex models. While simplified models may work for many aspects of explanation of our lives, they can also distort the scientific information to the point where parts of the causal story are lost or misconstrued" (Grotzer and Perkins 2000). The importance cannot be understated. A military commander cannot ethically or responsibly put his soldiers in harms way without working rigorously to observe, research, and understand the local causal dynamics where his military forces and partners will intervene.

Joint Doctrine, explicitly, and Army Doctrine, implicitly, recommend that military commanders and staffs exercise systems thinking in operational planning and

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[1]Perhaps, we first understand the world simply. A person might say to himself, "If I turn the key to my car, it turns on. So, turning the key is the cause. If I don't have my key, the car won't run. If I have my key, it will." Then, perhaps, we see it is complicated. "Even though I turned the key, the car won't run. Perhaps something in one of the car's systems is broken." Then it gets complex. "I have the key to my car. I know the parts of the car's systems are all working. But the car won't work because three weather systems collided resulting in Hurricane Sandy. Hurricane Sandy and its intertwining subsystems interacted with the human built infrastructure system and the tidal flow of the ocean to create flooding where I parked my car. I parked my car on the street because other people had already filled all the spots in the parking garage while I went to get supplies to prepare for the storm. My car won't work because all of these systems collided and my car got flooded with water." Emergent causality or perhaps systemic causality.

execution. However, current Military Doctrine fails to fully explicate and apply a complex systems perspective. The question arises: does any senior military commander use complex systems theory to understand, describe, and intervene in the operational environment? To this end, I analyze two briefings and a set of command brief slides that then, Lieutenant General David M. Rodriguez used to articulate his understanding and interventions in Afghanistan as the Commander of International Security and Assistance Force Joint Command. I also analyze his Foreign Affairs article on Afghanistan, published soon after he left Afghanistan in July 2011.

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Military Doctrine and Systems Theory

Joint and Army Doctrine implicitly reinforce the idea that leaders must understand systems theory via operational design, Army design methodology, and definitions of leadership. "Strategic Leaders, like direct and organizational leaders, process information quickly, assess alternatives based on incomplete data, make decisions, and generate support. However, strategic leaders' decisions can affect more

people, commit more resources, and have wider-ranging consequences in space, time and political impact" (Headquarters, Department of the Army 2012d, 2-5).

Army Leadership doctrine, Army Doctrine Reference Publication (ADRP) 6-22 emphasizes both the far reaching consequences of a leader's decisions and (implicitly) an environment. "Organizational leaders usually work with more complexity, more people, greater uncertainty, and a greater number of unintended consequences. Organizational leaders influence people through policymaking and systems integration in addition to face-to-face contact" (Headquarters, Department of the Army 2006, 2-5). The language of ADRP 6-22 implicitly indicates the use of systems and social systems theory as a baseline. However, it does not explain how a military leader should think about the terms "complexity," "uncertainty," "unintended consequences," or "systems."

Joint Doctrine and Field Manual (FM) 3-24, *Counterinsurgency* go further. These publications explicitly require a commander and his staff to use systems thinking within operational design methodology.[2] However, only FM 3-24 contains a definition of what the term "systems thinking" means.

> Systems thinking involves developing an understanding of the relationships within the insurgency and the environment. It also concerns the relationships of actions within the various logical lines of operations (LLOs). This element it based on the perspective of the systems science that seeks to understand the interconnectedness, complexity, and wholeness of the elements of systems in relation to one another.[3] (Headquarters, Department of the Army 2006).

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[2]FM 3-24 predates the creation of the term "Army Design Methodology" and uses the Joint doctrine term of 'operational design.'

[3]This would be a good definition for 'social systems analysis." Also, this definition incorrectly limits analysis to the insurgency. The value of a social network analysis is understanding how *all* of the actors within each proximate context relate.

The authors of FM 3-24 created a definition of systems thinking as they believed it applied to the military and an operational environment. While a contestable definition, it is the only attempt to define systems thinking, in any Joint or Army doctrine and is not included in any terms or definitions list.

Recently, the Army began a new approach to doctrine in the form of the Army Doctrine Publication (ADP) and ADRP. With the publishing of the ADP and ADRP 3-0 *Unified Land Operations* and 5-0 *The Operations Process* in 2012, the corresponding FMs were rescinded. The changes profoundly reshape language, terminology, and thus way the Army sees both itself and warfare. Currently, military practitioners, educators, and scholars are working hard to understand what changed, and the implications, as evidenced by long discussions on Milsuite, Facebook, at conferences, in electronic forums, and published articles.

With the publication of the ADP and ADRP 3-0 and 5-0 nearly all language specifically referencing, systems thinking, was removed from Army Doctrine (exception FM 3-24, 2006). In contrast, these publications added limited descriptions of some ways to think about social interaction. Some argue such guidance; when combined with Political, Military, Economic, Social, Infrastructure Information-Physical environment and Time (PMESII-PT) analysis and Center of Gravity (COG) analysis, leads a staff to a sufficient understanding of the operational environment. Others argue that operations, planning, and intelligence doctrines:

> [D]o not provide the information necessary to make succinct decisions about military action in the realm of conducting a full range of military operations. The current Joint and Army intelligence doctrines lack a framework needed to analyze sociopolitical variables, in order to piece together the complex nature of human

interaction, social organizations, and their roles in the operational environment. (Whitfield 2012, 13)

Furthermore, Whitfield goes beyond PMESII to explain the limitations of the current adversary focus in operational analysis and the need for a framework to analyze the interactions within and between human systems (Whitfield 2012, 23). The Joint and Army planning communities need a nuanced understanding of systems theory and its application in the operational environment.

Precise, Simple, and Clear or Complexity?

Army narratives, culture, and doctrine continue to embrace direct causality, simplicity, enduring Principles of War (Jomini), and a linear hierarchical, in understanding the Army and its associated social networks. Military educators continue to guide students to look for the COG defined as "The source of power that provides moral or physical strength, freedom of action, or will to act" (Joint Chiefs of Staff 2011b). From a complex systems perspective, no such center—one definable source of power existing across all echelons of war, that, if attacked, will decisively defeat an enemy—exists, with the exception of complete genocide. In contrast, some supporters of COG analysis tend to argue that, the COG is relevant across the strategic, operational, and tactical levels of warfare, and to all Army operations except for; insurgency, counterinsurgency, revolution, unconventional warfare, irregular warfare, stability operations, peace enforcement, peace keeping operations, wide area security[4], relief or

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[4]Wide area security, a newly published term (2012), is "the application of the elements of combat power in *unified action* to protect populations, forces, infrastructure, and activates; to deny the enemy positions of advantage; and to consolidate gains in order to retain the initiative" (Headquarters, Department of the Army 2011).

reconstruction efforts, security cooperation, or engaging mission command[5] as strategic

leaders. Yet, each of these efforts combines to comprise the majority of Army and Joint

operations.

Others, support COG analysis only when executing combined arms maneuver at

the tactical level of warfare. Within these limitations (tactical, combined arms maneuver)

a COG analysis might make sense. Even so, such an argument does not eliminate the

need for systems thinking as applied to unity of action, as combined arms maneuver is

not executed in isolation. Indeed, combined arms maneuver occurs among unified action

partners within the context of United States (U.S.), allied, coalition[6] and partner political

objectives, public opinion within the U.S., partner nations and key other stakeholders,

and as a portion of activities across the phased planning spectrum (Joint Chiefs of Staff

2011b). Each of these arenas requires an understanding of the actors involved, how and at

what level they are connected, and the ways they influence how our enemies, our

partners, and we fight. Fundamentally, our strategic and operational realities reflect a

complex world of living beings that adapt and do not maintain one single source of

power.[7]

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[5]The point of mission command, "the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leader in the conduct of unified land operations," is to decentralize the Army such that each leader knows the commanders intent and may thus intelligently make decisions as applied within his localized operational environment (Headquarters, Department of the Army 2012b).

[6]General Mattis and others argue that the United States will never go to war again alone i.e. without allies or a coalition (Guest speaker program U.S. Army War College).

[7]It is sadly funny that we continue to fight wars expecting that if we just kill the president (Iraq), the terrorist leader (Bin Laden), or destroy the logistics train (Vietnam) or people's will (Germany), we will win. We are always 'surprised' when a new leader

Some might argue that an operational environment may have many "centers of gravity" intertwined within coexisting systems.[8] Dale Eikmeier (and Joint Doctrine) disagrees. Eikmeier writes "joint doctrine needs to break from Clausewitz and develop new definitions of the center of gravity" (Eikemeier 2010). He continues by arguing:

> SoS [System of Systems] nodal analysis, while a useful technique for providing insights into understanding a system, is not a practical method for identifying the COG and should be replaced with the easier to use "ends, ways, and means" method. Indeed, no method, no matter how detailed, will produce truly scientific solutions. However, a disciplined and easily understood process such as the ends, ways, and means method can more efficiently meet the intent of JP [Joint Publication] 5-0.

> The best way to determine a center of gravity involves a holistic viewpoint and systems theory. Without it, COG identification is just guesswork. However, the systems theory covers a lot of ground, and it is easy to get lost in a system's networked forest of nodes and links. Arthur Lykke's strategic framework offers a simple solution. The framework's three simple questions—What is the desired end state? How can it be achieved? What resources are required?—are systems theory boiled down to its essential elements in support of COG analysis. (Eikemeier 2010)

Although Eikmeier initially appears to be arguing for an understanding of systems theory, he fundamentally contends that it can be better consumed by "boiling it down: into the Ends, Ways and Means model". In contrast, I argue that while complex systems theory could and should be used in an approach to Ends, Ways, and Means, a commander or staff officer not educated in systems theory concepts or vocabulary will have difficulty

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steps in, a people uses unexpected means of sustainment, or a population continues to fight (Germany, American Revolution).

[8]Some systems important to modern warfare: global energy production and distribution systems, local, regional, national, continental and global governance systems, economic systems, legal systems, ethnic diaspora systems, religious systems and subsystems, food production systems, and entwining ecological systems.

conceptualizing, rigorously analyzing, and attaining a needed granular understanding of, the operational environment.

Eikmeier's suggestion and disregard for Clausewitz does not reflect a current, multidisciplinary understanding of systems theory or the unified action environment. In fact, his ideas seem more in line with a Jominian approach to warfare where one uses "clarity, logic, precision and testable criteria" to determine the "true COG" (Eikmeier 2010). Jomini too proposed his (theory) Principles of War, in hopes of moving warfare into a precise science that his readers could easily grasp and popularize. Jomini argued that as his Principles were scientific in nature, they would endure throughout time and all levels of war . . . with the exception of civil, religious, national or wars of opinion (Shy 1986, 143-186). While Eikmeier's concept of the COG, Jomini's Principles of War and Lykke's Ends, Ways and Means model (Lykke1998) provide a useful way of looking at some action situations, none of these approaches inherently considers the complex systems theory concepts of emergence, punctual time, durational time, feedback loops, or systemic causality.[9] Nor do any of these approaches provide a framework to rigorously research and analyze the complexity of human social networks or multiple systems interacting and influencing conditions.

To understand why these approaches pose a problem, one must consider various levels of causality and complexity. When a person assumes direct causality, an Ends, Ways, and Means model works well. To illustrate, imagine a person wants to drink a cup of coffee (ends). He has five dollars (means) and decides that as he does not have a coffee pot, he will walk to Starbucks and buy a cup (ways). If he executes the ways, using his

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[9]Discussed in Chapter 2.

means, he will obtain his cup of coffee (linear causality). However, Starbucks may be closed; the workers on strike or their machines broken. He might get hit by a car, fly away in a tornado, a bomb may explode, or the coffee banned as an illegal stimulant. I argue that the Principles of War, the Ends, Ways, and Means model, COG analysis and revised doctrine fail to account for the central role actors and their connections play in shaping the operational environment.

The reality of the operational environment requires responsible commanders and staffs to recognize causal complexity. Lieutenant General Rodriguez paints operational pictures of intertwining networks of people. He directs his operational and tactical leaders to understand, connect with, redirect, and in some cases destroy actors and their linkages. Rodriguez emphasizes strong connections as the means to stability, the means to legitimate governance, the means to a trusted Police Force, and ultimately, the means of successful Unified Action (Rodriguez 2011c).

Furthermore, Rodriguez does not limit his focus to the enemy, but instead places significant emphasis on the interactions of unified action partners. Then, he explains how these interactions shape, and sometimes create the enemies of Afghanistan through bad international community practices—"alienate people, undermine traditional leaders, feed malign actors, ignore economic conditions, fair prices, and fair salaries at local level; weaken strategy and relationship with Afghans through civilian casualties" (Rodriguez 2011c). As such, unified partner actions and enemy systems feedback, back and influence each other. A commander and his staff should think about their own organizations and environment in terms of complex systems theory.

Does this really matter? Responsibility, Reality, and Narrative

In short, yes. A commander and his staff charged "to reduce the capability and will of the insurgency, support the growth in capacity and capability of the Afghan National Security Forces, and facilitate improvements in governance and socio-economic development in order to provide a secure environment for sustainable stability that is observable to the population" (Interanational Security Assistance Force 2012), must have a grounding in complexity. Systems theory matters when a geographical combatant commander and his staff attempt to determine mission objectives based on strategic guidance provided by Ambassadors, Congress's authorizations and appropriations of program funding, the National Security Strategy, Presidential and Vice Presidential remarks, guidance from the individual members of the National Security Council, and other sources of strategic direction. It matters when the Army tries to understand its high suicide rate (O'Gorman 2012), why soldiers mass murder other soldiers (Seba 2009) or innocent civilians (Alexander 2012), why toxic Army leaders continue to emerge (Mattson 2012), or why civilian scholars and commentators question the selection of Army General Officers (Metz 2012). Each challenge exemplifies the collision of complex social systems.

Using systems theory as a base to understand social systems and collective action problems can help unified action leaders build stronger internal organizations, better partnerships, and more effective interventions. With an educational base in systems theory, frameworks such Ostrom's Institutional Analysis and Development Framework (Gibson et al. 2009), or Whitfield's Intelligence Fusion Paradigm (based on the Institutional Analysis and Development framework) (Whitfield 2012), can greatly help

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strategic, and operational leaders understand intra-national and international non synchronized strategic direction. Furthermore, a base in systems theory combined with an appropriate framework to analyze institutional collective action, increases the likelihood of effective unified action in both combat and security cooperation environments at all echelons.

This assertion is based first on Rodriguez's mental model of the operational environment and his linkage of strong connections within unified action, to mission success. Second, Ostrom's research as applied to multinational aid and development projects, is similar in dynamic to "aiding and developing" a partner nation's joint military forces: within the context of the Ambassador and his country team, the President's direction, the authorization and appropriation bills passed by the Senate and Congress, the Geographical Combatant Commander's understanding of bilateral, regional, seam and transnational (functional area) policies in the context of authorized and approved resources; the interests of the supporting Joint U.S. forces; the wishes of the aided nation's government, military, components of that military, local population and their aid expectations; other nations (friendly and not) also aiding the recipient country; and the contracted corporations providing goods and services at a price. Two, three, and four star General Officers and their staffs, must understand and have ways to think about the complexity of these dynamics.

One could go further to argue that in a Unified Command and Mission Command environment, Army officers need the capability to analyze and articulate key ideas of systems theory as applied to collective action problems. Unfortunately, as no such curriculum exists for all Field Grade Officers (the backbone of staffs), many will

continue to express themselves in terms of linear causal language (Grotzer and Perkins 2000) and culturally familiar narratives. To wit, it is not surprising that most Army service members continue to think of themselves as professionally communicating within a hierarchical chain of command. Rodriguez shows that, despite the Army's common narrative, Army service members engage with each other via networks of relationships that cross a variety of hierarchical echelons.

Consider Army commanders, as referenced in leadership doctrine, know they must build relationships at all levels of their organization. They must physically train with their enlisted soldiers, mentor their junior officers, coordinate with their peers, and communicate key actions to their commanders. They know that they must build "horizontal relationships" with both governmental and non-governmental organizations that have no equivalent rank structure, and maintain good community relationships with American citizens from all social classes. Commanders, including Rodriguez, inherently appreciate that strong connections–both hierarchical and non-hierarchical–are key to being an effective leader.

This notion of connectedness suffuses all of Army life. Commanders recognize that the professional relationships they maintain with other members of their organization change as they move between roles. For example how a Colonel relates to a Staff Sergeant at work changes when he interacts with that Staff Sergeant as his Bible study teacher or his son's little league coach. Spouses—not restricted to the rules and customs that govern their military member—attend seminars, conferences that teach about "complex group interactions," group development, leadership, and personality types (School for Command Preparation 2012). Often seen as the "glue" of the military

community, spouses link members of the military and local civilian community with each other, and sometimes learn critical information regarding community, faster than the commander.

In fact, if mapped (actor-link-actor) and analyzed, one might find that in the architectural context of a given network, certain spouses holding certain types of positions (like head of the Family Readiness Group) might be located near the structural center of that community's social network. Tellingly, Nicholas Christakis indicates that by mapping the structure of a network, a social scientist can discern important information, and even predict the movement of "social contagions."

> But these things don't spread randomly, they spread through networks because we live our lives in networks and these networks have a particular kind of structure. The lines represent friendship relationships. You might see that people occupy different locations in the network and there are different kinds of relationships between the people. You could have friendship relationships, sibling relationships, spousal relationships, coworker relationships, neighbor relationships and the like.
>
> Different sorts of things spread across different types of ties. For instance, sexually transmitted diseases will spread across sexual ties. Smoking behavior might be influenced by their friends, or altruistic behavior might be influenced by their coworkers or neighbors.
>
> Not all positions in the network are the same. Some people have one connection. Some have two. Some have six. Some have ten connections. This is called the degree of a node. But in addition, there is something else. Both node A and B have six connections, but if you look at the image you can see there is something very different going on." (One is structurally positioned in the center of the network and B is closer to the edge.). A is more likely to be infected, and to get it sooner. For early detection, we can monitor A. If we were going to track something, we would want to monitor people in the center of the network. (Christakis 2010)

The point of this quote is: things spread through networks, across ties, position in the network matters, and the architecture of the network matters. The idea of Christakis' social contagions is important to understanding his idea that within social systems people

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interact based on their types of ties. This idea may help provide a way of thinking about the multiple roles and networks all actors in the operational environment move between.

In fact, Rodriguez maps interactions between individuals, organizations, insurgent networks, criminal patronage networks, security effect networks, and governance building networks. By using Christakis and Rodriguez, military professionals can seek to understand the multiple types of ties that individuals and organizations have as a means to understanding how discrete systems and networks connect. Systems thinking is valuable and so is mapping networks.

How Does a Commander see his Proximate Context?

Joint Doctrine and some military scholars indicate that commanders and their staffs should use complex systems theory as a base for framing the operational environment. However, these sources do not indicate that any General or Field Grade Officer does. In contrast, the Army's Command and General Staff argues via its curriculum,[10] that commanders need to provide a precise, clear understanding of the COG and variables (with implied direct causality) within an operational environment.

Does a commander, any commander, understand his environment in terms of complex systems influenced by interwoven networks of people acting within a range of arenas, depictable by nodes and linkages? Put simply, does any operational level commander describe his environment and/or mission in terms of actors and connections? If such a leader exists, does he describe various actors' narratives, patterns of interaction,

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[10]Complex systems theory is not taught a part of the core curriculum. In contrast, significant emphasis is placed on Center of Gravity analysis via class time and the "Operation Torch" take-home exam.

incentive structures, and social power structures? Does the commander work to understand systems and their internal time structures? Does he think about the interactions within and between multiple discrete systems, and consider patterns of emergence and feedback loops? Ultimately, do all operational level commanders understand their environment in terms of direct, precise linear causality, or does any commander understand his environment in terms of networks of actors connected to other networks of actors, all of whom maintain multiple roles within multiple systems and organizational groupings?

To answer this question, I analyze two briefings and a set of command brief slides that then, Lieutenant General David M. Rodriguez used to articulate his understanding and interventions in Afghanistan as the Commander of International Security and Assistance Force Joint Command. I also analyze his Foreign Affairs article on Afghanistan, published soon after he left Afghanistan in July 2011. This analysis reveals that complex systems theory suffuses how Rodriguez visualizes his mission to stabilize Afghanistan in cooperation with an International Coalition of Unified Action partners. Also, I show how Rodriguez's understanding, descriptions, and interventions follow a systems approach characterized by complex stakeholder interactions depicted by nodes and linkages. In fact, Rodriguez spends a significant portion of his brief emphasizing the actors and their connections at each echelon across unities of command, effort, and action. Rodriguez further explains the mission in terms of the many ways that his subordinates will connect with unified action partners and describes the friendly unified mission, as building and maintaining the number of actors and connections between themselves, and between friendly and neutral actors and agencies across civilian and

military organizational echelons (Rodriguez 2011d). In contrast, Rodriguez and his subordinate commanders simultaneously show that the way to defeat the enemies of the Afghan people is to disintegrate enemy networks by dissolving connections. "You have to understand that network out there, and those connections . . . and where they come from and who works with who and everything. [Y]ou are really attacking the network around this guy, to change his behavior, to limit the negative impact he has, or get rid of him" (Rodriguez 2011a).

Rodriguez and subordinate commanders (U.S. Army Counterinsurgency Center 2011) consistently use language common in complex systems theory. Rodriguez refers to the Afghan system, link, linkages, connections, relationships, (human) networks, synchronization (time) of multiple groups (systems and networks) of people (nodes), all working on their own organizational, functional, and personal agendas pursuing a unity of effort. To note, Rodriguez uses these terms in reference to adapting, changing, complex systems, and several of his Brigade, Battalion, and Squadron commanders[11] do too (U.S. Army Counterinsurgency Center 2011). Also, throughout the lessons learned report, commanders talk about actors, their connections, and emphasize:

> Our battlefield is the Afghan people. We dominate our partnered AO through the support of the local populace, gained with positive interaction at every opportunity. . . . It mandates a deliberate link between combat operations and civil military relations, done by design in every operation. If we fail to own the population, then we give the enemy an endless source of recruits, sanctuary, and logistical support. (U.S. Army Counterinsurgency Center 2011, 7)

In this quote, a Marine Battalion Commander describes the partner and enemy actions creating feedback loops that support or undermine mission success.

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[11]Division level officers contributed comments that support this statement, but the report did not indicate commander status.

Indeed, further analysis reveals that Rodriguez and some of his subordinate commanders think and describe their thinking in terms of a series of interrelated stakeholder interactions, depicted by nodes and linkages.[12] It also reveals Rodriguez uses systems based experimental intervention (Connolly 2011); understands and identifies feedback loops (Connolly 2011; Loode 2011); perceives that different social systems have their own internal time (Connolly 2011); is aware that the echelon at which a person serves may determine their proximate context, while not limiting the boundaries of the social system (Gibson et al. 2009); that Rodriguez, his partners and his subordinate commanders do not limit the concept of enemy to humans or armies, but instead see enemies as systems or actors with the opposing agency (Rodriguez 2011a; Rodriguez 2011b; Rodriguez 2011c; Rodriguez 2011d; Rodriguez 2011e) and that actors and agents simultaneously maintain numerous roles within discrete networks.

Finally, several findings require further emphasis and consideration. First, as the International Security Assistance Force Joint Command (IJC) Commander, Rodriguez viewed mission success (stability) in terms of "strong connections" and mission failure (instability) in terms of weak connections, between friendly and neutral actors and organizations (International Security Assistance Force Joint Command 2011). This systems perspective contrasts sharply with Eikmeier's assertions that systems theory "just does not work in the real world" (Eikmeier 2010).

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[12]This study uses the concept of N of 1. If a researcher finds one example that something exists, then further research can be done. N of 1 creates the opportunity for others to identify how widespread a phenomenon is. V. S. Ramachandran, "The Science Studio With V.S. Ramachandran," *Scribd.*, Roger Bingham, March 2012, http://www.scribd.com/doc/866441504/Transcript-Interview-vs-Ramachandran (accessed November 28, 2012).

Second, the "enemies of the Afghan People" are perceived and described as people, networks, practices, and behaviors. This conflicts with military doctrines that focus strategists and planners on Jominian's COG. Further, by including "bad practices" as an enemy, Rodriguez unveils that partner actions loop back into the Afghan system and create new emergent outcomes. Indeed, he shows that bad civilian and military practices—to include collateral damage, lack of accountability, over payment of local workers—result in perverse incentives that undermine the mission of building stronger friendly and partner networks (Rodriguez 2011d).

Third, through careful examination of the order and speed with which unified action partner systems interact with each local system (Helmand, Kandahar etc) Rodriguez found that "the Afghans, supported by the international community of course, had a tougher time building government capacity in the wake of security gains." (Department of Defense 2011) Subsequently, Rodriguez describes the (unified action) Partner Teams's efforts to mitigate the wake. Furthermore, Rodriguez emphasizes "the need for prior planning to prepare governement activities in advance." This finding indicates that the FM 3-24 doctrine of Clear, Hold, Build (Headquarters, Department of the Army 2006), may need to add an additional step to become Build, Clear, Hold, Build. Also, Joint doctrine's "Phasing Model" (Joint Chiefs of Staff 2011b) may need further examination and allowance for building popular support in the area of operations and not just the international community.

This process of research—to include analyzing and mapping a commander's speech, careful analysis of his mental model, evaluating the model and map for core systems thought and elements of the proximate context—provides valuable insight to the

staff officer working to contribute to a rigorously developed understanding of the environment. Such a process further contributes to the conceptualization, research, and articulation of causality within the Joint Operations Planning Process. Also, the commander's mental model of actors and connections may provide a visual understanding that a speech or text cannot. Ultimately, as Rodriguez exhibits, identifying an environment's stakeholders and their connections provides a commander and his staff a uniquely granular environmental understanding and concept for unified action.

CHAPTER 2

LITERATURE REVIEW

Uncertainty in the future operational environment will continue to increase as political, economic, informational, and cultural systems become more complex and interconnected.
— TRADOC Pam 525-3-1, *The Army Operating Concept*
August 19, 2010

Military Scholarship and Doctrine

Military Doctrine and scholarship indicate that commanders and staffs should use systems thinking as they work through strategic planning, operational art, operational design and specifically the operational approach. One could argue that commanders must think in terms of actors and their connections simply to understand the policies, laws, and politics that shape mission objectives and supporting strategy development. One could further argue that effective unified action cannot be pursued much less achieved without understanding how to connect with the other members of the unified action partner team. However, to date, many question whether any commander understands, visualizes, and describes his operational environment in terms of actors and their connections.

Joint Doctrine directs that "commanders and staffs consider differences in partners' laws, doctrine, organization, weapons, equipment, terminology, culture, politics, religion, language, and caveats on authorized military action" (Joint Chiefs of Staff 2011b, II-11). Unfortunately, neither Joint nor Army Doctrine provides a synthesized framework to think about collective action in the operational environment. Also, the tools doctrine provides, either approaches systems theory from a complicated systems theory base, where each nonintegrated tool breaks a set of information into specific variables to

examine, or uses language that directs the officer to focus his thinking only on the enemy (Whitfield 2012). Such an approach fails to provide the officer with a means to think about and resource unified action and the partner relationships intrinsically required.

Further, Joint Publication (JP) and ADRP 5-0 continue to direct practitioners to examine only the "relevant" actors in an environment. In systems theory, all stakeholders are relevant. Christakis and Barabasi both show; that the more information one has on the actors (nodes) and their connection, the more one can see the network architecture and study the effects of the connections (Barabasi 2012; Christakis 2010). Due to the enormity of such a task, officers should focus on first identifying the actors and connections most relevant to his position. For example, an officer working on subject X will need to identify all partner actors and their connections working on X. Then, that officer should identify all neutral and enemy groups interested in X, and their connections.

Next, Joint and Army Doctrine unhelpfully use language that defines systems in terms of simple and complicated systems, instead of complex systems. For example, throughout ADP and ADRP 3-0 and 5-0 the word "systems" is synonymous with linear processes, complicated weapon systems, the Internet, and communications technology. JP 1-02 defines synchronization (a term helpful when thinking about the collision or integration of unified partner systems), from a maneuver tactics perspective: "The arrangement of military actions in time, space and purpose to produce maximum relative combat power at a decisive place and time." This definition is problematic if maximum combat power causes negative feedback loops (bad international community practices) that undermine overall mission success. It is also troubling if neither a decisive place nor

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time exists. Further, this definition limits thinking when attempting to analyze the interactions of partners in a unified action environment.

In part, examples like this occur because doctrine as a whole is not cohesively designed and nested from a unified concept of reality. Doctrine writers have individual agendas to present reality from their individual experience, time frame (cold warrior or Coindinista), and current position. Many could argue that mission command and wide area security[13] are huge steps forward in imbedding systems thinking into Military Doctrine without explicitly including systems language. In fact, Stephen Bungay examines mission command as a useful organizational business model, where the organization is not a machine full of linear processes and the ideal worker is a robot, but instead "an organism, a set of human relationships" (Bungay 2010).

FM 3-24 lays out concepts such as social norms, culture, identity, beliefs, values, power and authority, interests, and other components of the action situation Perez and Ostrom describe (Gibson et al. 2009; Perez 2012). FM 3-24 misses key systems concepts to include feedback loops, causality, emergence, and the concept of collective action. Additionally, though FM 3-24 explicitly discusses social network analysis and the value of mapping networks, this work is relegated to an annex and not integrated into the larger body of thinking. While Appendix B: Social Network Analysis and Other Analytical Tools states "For an insurgency, a social network is not just a description of who is in the insurgent organization; it is a picture of the population, how it is put together, and how

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[13]Some might argue that wide area security incorporates systems theory because: 1. WAS is defined in terms of unified action (and thus unified actors) 2. Acting "to protect populations, forces, infrastructure and activities" indicates decentralized actions of unified actors 3. WAS implies through decentralized action no center of gravity or possibility of decisive engagement.

members interact with one another" (Headquarters, Department of the Army 2006) this comment is buried on page B-15 in the midst of application to insurgent networks. That said, FM 3-24 clearly places emphasis on understanding actors, who they are linked to, and how they relate. It is the only publication, Joint or Army that includes any definition of systems thinking. Although it does not provide a grounding in systems theory, FM 3-24 continues to include systems thinking as a consideration of design. In summary, FM 3-24 has serious flaws but it is the best publication in Joint or Army Doctrine regarding systems, social systems analysis, and social network mapping.

Like FM 3-24, Joint Doctrine continues to require commanders to do systems thinking as part of design. In contrast, while Army Doctrine writers say they have worked to incorporate Joint Doctrine into Army Doctrine, they have also chosen to get rid of words, terms, and ideas that many argue are critical to operational art and specifically the operational approach. (Perez 2012; Dennis 2009; Cunningham 2010). Perhaps these doctrine writers made these changes because they, like Eikmeier, believe systems thinking is impractical, confusing, imprecise, and doesn't work (Eikmeier 2010). Perhaps, instead, the doctrine writers value systems thinking, but think most Field Grade and General Officers are incapable of grasping the concepts and applying them.

This latter idea has not been widely explored, but perhaps bears further research. Interestingly, the Amazon website's list of "Other Books for Junior Officers" (Foster 2012) lists Peter Senge's book, *The Fifth Discipline: The Art and Practice of The Learning Institution*, as an important read. Most military scholars writing about systems, design, or social networks quote Senge in their literature review. For instance Allen and Cunningham apply Senge's writing:

Systems thinking provides a framework for understanding and explaining organizational processes and how they perform over time. The use of system-thinking models helps members understand complex problems and develops shared team understanding while suggesting ways to leverage the problems and identify and test solutions—all processes that support learning organizations.

Senge's insights apply to the Department of Defense (DoD) and its armed services, which are undeniably large, stratified organizations composed of systems within systems. (Allen 2010)

In summary, several military scholars, including several School of Advanced Military Studies graduates, have written about how systems theory relates to design. Most of the scholars list the ethical, cultural, doctrinal, and practical reasons a commander (and his staff) must understand and use systems thinking as a baseline for understanding the operational environment and working through the operational approach. Furthermore, these scholars recommend practitioners find and use a theoretical framework to rigorously apply, systems thinking, or a "systems approach" to collective action problems (Reed 2006; Allen 2010; Perez 2011a; Perez 2011b; Dennis 2009).

As one might expect, each of these frameworks or approaches share some components but not identical ones. In part, this appears a result of the multiple ways authors think about systems. For example, Reed's article though well written describes the following approach: identify a system, explain the properties of the system as a whole, and explain the behavior or properties of the system in terms of roles or functions of the whole (Reed 2006). This approach misses key elements of systems thinking as presented by Perez and others. By suggesting the practioner focus on the actions and behaviors of a whole system and "thinking in terms of systhesis not analysis," Reed misses larger concepts of how systems relate to other systems. To be fair, significant

research and thought has expanded, clarified, and added to systems thinking since Reed wrote his article.

Dennis, a School of Advanced Military Studies graduate, discusses aspects of systems thinking to include "a shift of mind from people thinking of themselves as individuals to thinking of themselves as part of an emergent whole that is larger than them" (Dennis 2009, 17). Unfortunatly, this idea does not reflect the social sciences' extensive research on identity, roles, and archetypes. While parts of individual identity— to include how a person views time—are shaped by their "culture chains" (Hall and Hall 2000), this is not how one should understand or think about individuals[14] in social networks, or as Ostrom writes, collective action situations. Ultimately, Dennis examines several models and settles on Checkland and Poulter's Soft Systems Model as the one he sees as having the best military application in the design process because it shares the same steps (Dennis 2009).

<u>Systems Theory and Collective Action Analysis</u>

When a commander and his staff work to understand the operational environment, their team will need to focus on the social systems and networks within the larger, open system of their operational environment. I define systems thinking in terms of the person who does it: a military practitioner of systems thinking uses a core understanding of multidisciplinary systems theory and applies a collective action analysis framework in identifying and analyzing actors, agents, systems, and their associated linkages within

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[14]Weaver's book *Culture, Communication, and Conflict* is an excellent resource for studies in identity, culture, cross cultural communication, negotiation, enemy imaging, heuristics, psychological numbing, and authority within cultures. His class *Psychological and Cultural Bases of International Relations* is even better.

social systems. This definition includes the concept that a mature but evolving framework helps the practioner to analyze, organize, visualize, and articulate a multifaceted understanding of the relationships between the actors, networks, systems and their patterns of imbrication within a specific (open system) environment.

The purpose of my research is not to uncover the relevance and use of a particular framework, as applied to operational art and design. Nor is the purpose of my research to discover and test which aspects of current multidisciplinary systems theory are most relevant or applicable to military thought. The first has already been attempted by Celestino Perez Jr. in his paper "A Practical Guide to Design, a way to think about it, and a way to do it," via his Local Dynamics of War Scholars Seminar, his unpublished study guide labeled "Design and the Institutional Analysis and Development Framework," and his paper entitled "High-Stakes Political Judgement: An Analytically Eclectic Framework for Thinking What We Are Doing."[15]

The second—a determination of what systems theory is and how it applies to military opperations—is constantly evolving. Systems theory and social systems network theory have made incredible steps forward in the past few years, through the work of social scientists Nicholas Christakis and James Fowler, physicist and network theorist Albert-Laszlo Barabasi, physicist and social network theorist Duncan Watts, and political theorist William E. Connolly.

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[15]These papers, based on Elinor Ostrom's IAD Framework, provide a way for the military practitioner to think about, visualize, and articulate their understanding of the operational environment. If the commander and staff participate in the process, the actual process builds staff cohesiveness, communication and a common understanding of the commander's vision of the environment, the problem and the ways the command, its subordinates and partners will intervene.

As I view it, there are several key ideas that one should understand about systems. First, while some might argue all systems are open and complex, I find it useful to distinguish between complicated and complex systems. Loode explains that complicated systems are ones in which:

> [T]he various elements that make up the system maintain a large degree of independence from each other. Removing one element leads to either system failure (such as when the car's radiator is removed and the engine overheats), or functioning with reduced effectiveness (such as when the windscreen wiper does not work anymore). At no stage is another part going to take over the function of the missing part to keep the system working close to its previous levels.

He also explains that complex social systems "cannot be understood and manipulated by reducing them to their individual components." The idea is that if one worker, president, criminal, terrorist, or farmer is killed, the complex system will adapt.

A second key idea within systems theory is that systems and their subsystems interact in patterns and layers of causality—from clear, linear causality to Clauswitzian fog and friction (emergence). When examining human behavior, Parsons has developed a typology of four causal logics: (1) structural—"what people do given 'material' structures like geography, distribuion of wealth, or distribution of power"; (2) institutional—"what people do as a function of their position within man-made orgaizations and rules" and implies unintended consequences; (3) ideational—"what people do as the cognitive and/or affective elements that organize their thinking, and see these elements as created by certain historical groups of people," and (4) psychological—"what people do as a function of the cognitive, affective, or instinctual elements that organize their thinking . . . hard wired features of how humans think" (Parsons 2007, 12). Parson helps us to begin to think about the local dynamics of human behavior and causality within social systems and networks.

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Connolly helps us to understand ways of thinking about systems and their collisions. He tells us that complexity implies that the whole is not reducible to the parts and that we should think in terms of "connectionism"—the relationships between compontents, as opposed to "holism"—where the system is the principle entity, or "individualism"—where the component is the primary entity (Connolly 2011, 34-35). In other words, focus on how actors connect.

Connolly argues that all systems are open systems, susceptible to the influence of other systems (Connolly 2011, 19). As such, systems move between equilibrium (a condition of stability) and disequilibrium (a condition of imbalance that creates emergent patterns). One way of thinking about equilibrium within a military context is the concept of synchronization. Rodriguez consistently talks about the work the unified partner team did to synchronize their associated internal systems. Rodriguez further illustrates that the unified partner team stabilized itself by increasing the number of participating actors, and building stronger connections between the team organizations and their members (Department of Defense 2011).

Here, one should note that systems theorists look at patterns within and between systems. These patterns help observers see feedback loops (beliefs, behaviors, and actions that "fold back into future desires, performative priorities and potentialities of action"), identify possible causal logics, and execute "experimental intervention."

Connolly uses the term experimental intervention to recommend that actors who work to create positive emergent outcomes should examine patterns of systemic interaction and experiment with ways of intervening. Then actors should examine the interactions and outcomes to "improve the chance that they do not pose more dangers or

losses than the maxims they seek to correct" (Connolly 2011, 165). In essence, Connolly describes the familiar "plan, execute, and assess" piece, but moves from clear accountablity and linear outcomes, to intellectual humility in the face of interacting, unstable complex systems. In this construct, actors interact with an environment, observe the outcomes, examine feedback loops, understand the new conditions, visualize desired conditions, and try again until productive patterns emerge.

A third important idea within systems theory is "emergence" and "emergent causality." Connolly argues that when systems (force fields) that might not normally interact, collide, sometimes unexplained things happen that cannot be predicted. He writes:

> In a world of becoming, emergent formations are often irreducible to patterns of efficient causality, purposive time, simple probability, or long cycles of recurrence. This occurs in part through periodic intersections between different force-fields, as neural, viral, bacterial, geological, climatic, species, electrical, chemical, and civilizational force-fields set on different tiers of punctual-time infuse (or infect, disrupt, charge, energize, invade, etc.) each other, in part through the periodic emergence of new and surprising capacities for autopoiesis when such collisions occur, and in part through the patterns of reverberation between these collisions and capacities for autopoiesis during fateful periods of accentuated disequilibrium in one or two force-fields. (Connolly 2011, 17)

A soldier familiar with Clausewitz might see emergence as pertinent to thinking about "fog and friction" or "chance."

In Rodriguez's February 2011 Pentagon Brief, an audience member asks Rodriguez "Can you win without them? If they (Pakistan) don't do any more than they're doing now, can you be successful in Afghanistan?" and he answers: "I think we can but this gets back to the durability that you have to build in the Afghan security forces and the Afghan government. But I think it is doable if it doesn't continue, you know, if it

doesn't get significantly worse." In this instance, Rodriguez seems to allude to the

possibility of emergent causality. He can win, if it doesn't get worse.

Grotzer has other descriptions of causality and emergent causality. She created a

taxonomy of causality that "attempts to organize increasing complexity" for students

trying to understand causality implicit in science (Grotzer and Perkins 2000). This

taxonomy describes underlying causality (a simple and possibly incorrect causal

mechanism one invokes), relational causality (the patterns of interactions between causes

and effects), constraint-based causality (the focus is on the system as a whole and the

resulting patterns due to rules that are obeyed), probalistic causality ("the level of

certainty in the causal relationship"),[16] and emergent causality. Grotzer describes

emergence as: "This dimension refers to agency and to the compounding of causes and

effects in ways that lead to new and in some instances, not easily anticipated, outcomes.

It ranges from centralized agents with immediate influence . . . to emergent entities and

processes that are organized out of earlier causal processes."

To add to the discussion, Lakoff recently coined (though did not specifically

define) the term "systemic causation." Lakoff does not exclude emergence, but instead

presents the idea that often, systems act in repeated patterns and these repeated patterns

have repeated outcomes. He writes that:

> [A] systemic cause may be one of a number of multiple causes. It may require
> special conditions. It may be indirect, working through a network of more direct
> causes. It may be probabilistic, occurring with a significantly high probability. It
> may require a feedback mechanism. In general, causation in ecosystems,

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[16]Probabilistic causality looks at "the correspondence between causes and effects
and whether there is absolute consistency or not. It ranges from deterministic systems in
which one expects 100% covariation to systems that are fundamentally uncertain, such as
those in quantum theory" (Grotzer and Perkins 2000).

biological systems, economic systems, and social systems tends not to be direct, but is no less causal.

Lakoff provides examples such "as smoking causes lung cancer," to demonstrate the systemic causation.

This idea, when combined with Barabasi's and Christakis's work—that one need not always be surprised when systems interact—reinforces the idea that one can look for patterns of interaction, map networks, use frameworks, apply rigor to scholarship, and understand complex systemic causality—sometimes.

Connolly presents one last key idea relevant to this discussion of systems theory. He proposes that force fields (systems) maintain internal time cycles (punctual time). He contrasts this idea with "durational time–those periods of phase transition when reverberations between two fields set on different tiers of clock-time change something profoundly" (Connolly 2011, 71-72). A Staff Officer may find that thinking about time proves useful when examining the synchronization of unified partner action, Combined or Joint operations, combined arms maneuver, or any collective action engaging multiple systems.

This chapter has reviewed relevant Military Doctrine, military scholarship, complicated and complex systems theory, and associated taxonomies of causality. Military Doctrine and scholarship indicate that commanders and staffs should use systems thinking as they work through strategic planning, operational art, operational design, and specifically the operational approach. However, while commanders may need to think in terms of actors and their connections to lead a unified action effort; understand the policies, laws, and politics that shape a commander's strategy development; or

describe an operational environment, many soldiers, educators, and scholars believe no such commander exists.

In an attempt to fill this gap in the literature, to this end, I analyze two briefings and a set of command brief slides that then, Lieutenant General David M. Rodriguez used to articulate his understanding and interventions in Afghanistan as the Commander of International Security and Assistance Force Joint Command. I also analyze his Foreign Affairs article on Afghanistan, published soon after he left Afghanistan in July 2011. In chapter 3, I explain my methodology of mapping the actors and connections Rodriguez and some of his subordinate commanders describe. In chapter 4, I map the described actors and connections, and provide analysis to determine evidence of systems thinking. Chapter 5 provides a list of findings, implications, and some areas for further research. Finally, this analysis reveals that complex systems theory suffuses how Rodriguez visualizes his mission to stabilize Afghanistan in cooperation with an International Coalition of Unified Action partners.

CHAPTER 3

RESEARCH METHODOLOGY

> One of my favorite analogies is if I bring a pig into this room right now, and I say this pig can talk, and you say really, what do you mean, the pig can talk? And I wave my wand and all of a sudden the pig starts talking. What would be your reaction? You would say, My God! You wouldn't just say that's an N of 1. Show me another pig.
>
> — V. S. Ramachandran, January 2012

Introduction

Military scholars and doctrine direct that commanders and their staffs should use systems thinking, but fail to define the term or explicate and apply complex systems theory. Furthermore, the tools doctrine provides such as: Lines of Operation, PMESII; Area, Structures, Capabilities, Organizations, People, Events (ASCOPE), System of Systems (SoS), or COG analysis, should help the military practitioner to gain a better understanding and visualization of the operational environment. However, these tools break systems into parts that act as checklist categories to be filled, rather than overlapping, interacting, adaptable networks that shift, change, and sometimes feed back into each other. Joint Doctrine is right—despite its failure. Commanders and staffs do need an educational base in complex systems theory. Military leaders are required to act, to intervene, in unfamiliar environments not of their choice—but in support of political objectives. All such actions indelibly alter the lives of those intervening and those living in the environment of intervention.

With the gravity of this responsibility, commanders seek to understand their current environment, visualize progression towards the conditions their political leaders

broadly direct them to achieve, and describe those visualized paths to their partners and subordinates. Imbedded throughout this work—carefully examined or hidden in heuristics and assumptions—are causal logics. If a person does not have a base in systems theory and taxonomy of causal logics, likely, he will neither have the means to rigorously think about or accurately articulate the "whys" and nuances of actor interactions in the environment (Gibson et al. 2009). Without systems theory, planners tend use doctrinal processes and tools that may lead to planning hubris and over simplified views of operational reality. Doctrine needs new or revised tools based in complex systems theory.

As military strategists and planners wish to shape their efforts from the best possible understanding of current conditions, and as doctrine dictates, commanders and staff officers should use systems thinking when working through design and the Army Design Methodology. For the last six years, graduates of the Army's elite School of Advanced Military Studies have been educated in systems theory and subsequently served as Staff Officers supporting high level commanders. However, the question remains: does any senior level commander use complex systems theory when working to understand, interact with, and intervene in the operational environment?

<u>Methodology: a Qualitative Analysis and N of 1 Approach</u>

This study roughly corresponds with the Miles and Huberman qualitative analysis framework of: data reduction—determines what data to single out to address research question; data display—maps of Rodriguez mental model; and conclusion drawing and —analysis. Thus, this research uses a qualitative approach to examine the question "Does any senior level commander use complex systems theory when working to understand,

interact with and intervene in the operational environment?" As such, it uses narrative analysis and textual analysis as applied to the subjects published speeches, presentations, and published written text. While examining a multiplicity sources across a range of medium, this study focuses on one subject: 2009 to 2011 International Security Assistance Force (ISAF) Joint Commander David M. Rodriguez.

Over the course of a 36 year career, Rodriguez has commanded at every level, and commanded extensively in combat to include eight of the last 11 years. He is one of only two people to Command the IJC, and one of only eight American senior generals to hold top level Command in Afghanistan. Currently, "as the commander of the Army's largest organization, he is responsible for 265,000 active component Soldiers, and training and readiness oversight of 560,000 Soldiers of the Army National Guard and the U.S. Army Reserve" (FORSCOM 2012).

As IJC Commander and before that the Regional Command East Commander, Rodriguez's understanding, visualization, and description of the operational environment influenced the thinking of hundreds of thousands of American soldiers serving in combat. His commander's intent and mission statement guided not only those soldiers, but also the service members of 47 coalition countries and all members of the unified action partner team, working for a combined unity of effort. As he influenced people in those groups, they interacted with the government, security forces, and people of Afghanistan. An N of 1, but a very influential N of 1.

V. S. Ramachandran has helped the world's science community to value studies that only focus on one subject. Ramachandran successfully argues that the N of 1study opens the door to further research. He illustrates:

> [A]ll of these discoveries: commisurotomy, split brain patients, were based on an N of 1 or N of 2, initially. And in fact, I'll go a step further, not a single discovery has been made by saying let's analyze all the data from hundreds of patients and see if there is a trend. I'm not saying that never happens, but there is a lesson here. Why is it 30 discoveries have been made with an N of 1 and not a single one by averaging? I'm overstating it a bit, but I think that's roughly true. So the short answer is you have to start somewhere and then obviously you need to confirm it.

Perhaps this study of the International Security Assistance Force Joint Commander Lieutenant General David M. Rodriguez's mental model will open the door to further research of systems thinking among soldiers connected to Rodriguez's networks.

<u>Mapping Rodriguez's Mental Model of the Afghan
System via Actors and Connections</u>

The Maps

1. Using Rodriguez's 2011 speeches, published journal article, and slide presentations, I identify and map the actors and connections Rodriguez depicts.

2. The figure includes the map of actors and connections, a list of all of the actors listed in the source document(s), and a brief analysis of the local dynamics Rodriguez narrates.

3. The centrality of the node within the network maps the connections within Rodriguez's mental model that he describes. If other sources were included in the study and integrated into the map the shape of the network would change and would not depict Rodriguez's mental model.

4. Filled in circles represent actors. Circles are labeled as Rodriguez describes the node i.e. "10 power brokers" is one node, not 10, labeled, 10 power brokers.

5. All actors and connections are mapped the same way regardless of national, civilian, military, or other organizational affiliation.

6. The map depicts actors and connections. While organizational and individual hierarchies suffuse and connect throughout the Afghan system, there is no hierarchical design to the model.

7. If the map draws from a specific section of text, the text is reprinted directly below the figure. The actors are italicized.

8. This scope of mapping efforts is limited to the human systems comprised of actors and their connections.

The Challenges

1. It is very difficult to map a three dimensional construct in two dimensions. Ideally, each node should be the same size. Each line should be equal in length. While attempted, it simply was not possible. Differentiations between line length or node size bear no weight in this study, and simply reflect the tool limitations.

2. Some areas of Rodriguez's speeches provided challenges to mapping because of his use of language where the word describing an actor could actually be describing multiple sets of actors. For example, who is Rodriguez referring to when he says "we"? The possibilities are extensive. In example: We=Americans; We=ISAF and IJC; We=IJC and the Regional Commands; We=the campaign planning team Omid; We=the partner team executing Operation Omid.

Criteria for Analysis

1. Does Rodriguez describe his environment in terms of complex systems influenced by interwoven networks of people, depictable as nodes and linkages?

2. Does Rodriguez describe his operational arena in terms of actors and connections?

3. Does Rodriguez describe patterns of interaction between actors and/or groups of actors?

4. Does Rodriguez describe systems, and their internally and externally interacting time structures?

5. Does Rodriguez describe types of causality to include systemic causality, patterns of emergence, and feedback loops?

The purpose of this research is to answer the question: does any senior level commander use complex systems theory when working to understand, interact with, and intervene in the operational environment? Chapter 4 provides maps and analysis of Rodriguez's mental model in an attempt to answer this question.

CHAPTER 4

ANALYSIS

Chapter 4 presents research and analysis of International Security Assistance

Force Joint Commander, Lieutenant General Rodriguez's mental model of the Afghan

System. The mental maps provided were created using two briefings, a set of command

brief slides that Rodriguez used to articulate his understanding and interventions in

Afghanistan, and his Foreign Affairs article on Afghanistan, published soon after he left

in July 2011. Throughout these products, Rodriguez consistently maps friendly and

enemy actors, and their connections. And, while he describes his understanding of his

mission and operational environment to diverse audiences, Rodriguez maintains

consistent, though tailored, descriptions of the actors and connections.

The maps in chapter 4 provide pictures of portions, of Rodriguez's mental model.

These maps only depict Rodriguez's explication of the actors and their connections.

While these maps do show that Rodriguez visualizes and describes his environment using

systems thinking, further evidence of such thought must be sought in the text of his

speeches, slides, and other authored publications. To this end, Rodriguez narrates the

relationships between individuals, organizations, and networks within systems.

Furthermore, he identifies feedback loops (friendly, enemy) that move through and shape

the Afghan System. Finally, he describes his partners' and his subordinates' mission in

terms of strengthening friendly networks, diminishing enemy networks, and shaping

feedback loops and associated unified action partner behavior, to support mission

objectives.

IJC Mind Map of "Afghan System": Campaign Plan Omid (Planning) Partner Team *July 2009*

Actors/Agents
1. IJC commander
2. Partner Team – July 2009
(Campaign Plan Omid)
    a. ISAF
    b. Minister of Interior (MOI)
    c. Minister of Defense (MOD)
    d. National Director of Security (NDS)
1. Afghans
2. Key Areas (high concentration of agency)
    a. Population centers
    b. Commerce centers
    c. Areas of economic potential
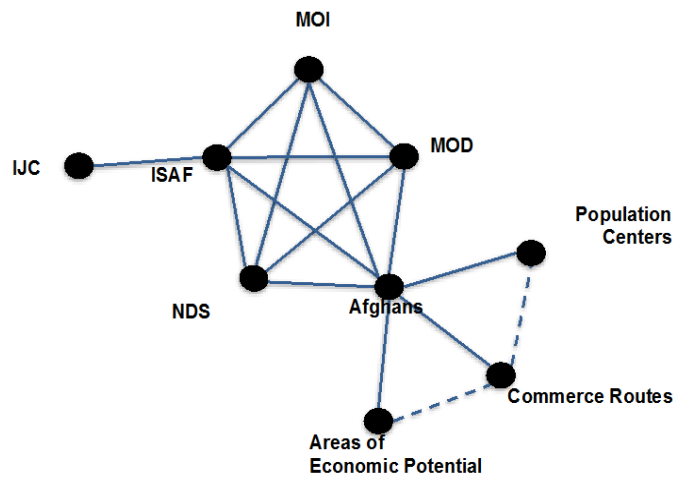
MOI   MOD   IJC   ISAF   Population Centers   NDS   Afghans   Commerce Routes   Areas of Economic Potential

"a social network is not just a description of who is in the insurgent organization; it is a picture of the population, how it is put together, and how members interact with one another" - FM 3-24

Evidence of Systems Thinking:
1. Map of actors and connections - nodes and linkages
2. Emphasis on synchronization between partners discreet systems
3. Focus on physical areas of concentrated human (actors) interaction (connections): "population centers, commerce routes, areas of economic potential

Figure 1.   Campaign Plan Omid Partner Team: July 2009

Source: Created by author.

Transcript Text: Eighteen months ago, *we* wrote the first country-wide operational-level comprehensive campaign plan that included our *Afghan partners*. That combined team of both *ISAF* as well as the three security ministries--the *minister of interior*, the *minister of defense*, and the *national director of security*--all put that plan together.

Now one of the important concepts was to concentrate and synchronize our efforts, where it most--where it was most important: *population centers*, *commerce routes* and *areas of economic potential*. That's the shaded area on the map in front of you. Now the *Afghans*, they were the ones who told us and guided us to those key areas, based on their knowledge of the human and the physical terrain of Afghanistan. The process started a yearlong effort to get everybody on the same sheet of music, synchronizing efforts in time and space. (Department of Defense 2011)

<u>Analysis: July 2009 Campaign Plan</u>
<u>Omid Partner Team</u>

1. Rodriguez opens his speech to a Pentagon audience by describing the team that worked together to develop Campaign Plan Operation Omid in July of 2009. In the accompanying text, Rodriguez identifies the following actors: I (the Commander IJC), we (the "combined" or "partner" team at punctual[17] time "18 months ago" (July 2009),[18] ISAF, Minister of Interior, Minister of Defense, National Director of Security, "they" (Afghans who guided) population centers, commerce centers, areas of economic potential.

2. Rodriguez further identifies "interwoven networks of people acting within a range of arenas" via his focus on physical areas of concentrated human interaction: "population centers, commerce routes, areas of economic potential" and the broader context of "human terrain".

3. Rodriguez emphasizes the need for synchronization between the elements of the partner team in saying "The process started a yearlong effort to get everybody on the same sheet of music, synchronizing efforts in time and space" (Department of Defense 2011). In thinking about and working to synchronize the elements of the partner team, Rodriguez uses a systems concept of time as a tool of analysis and intervention (see chapter 2, Connolly).

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[17]Punctual time is one type of time internal to systems. The other is durational time (Connolly 2011).

[18]At this point in punctual time Rodriguez refers to the 'partner team' as the combined team and then lists this group.

IJC Mind Map of "Afghan System"*: Campaign Plan Omid (Planning) Partner Team January 2011*

Actors/Agents
1. Afghan Civilian Ministries
2. (Afghan) Minister of Interior (MOI)
3. Embassy, United Kingdom
4. Embassy, United States
5. (Afghan) Minister of Defense (MOD)
6. Afghan People
7. (Afghan) National Director of Security (NDS)
8. (Afghan) Minister of Rural Rehabilitation and Development
9. (Afghan) Independent Director of Local Governance (IDLG)
10. International Security Assistance Force (ISAF)
11. International Security Assistance Force Joint Command (IJC)
12. Civilian Players

Evidence of Systems Thinking:
1. Map of actors and connections - nodes and linkages
2. Increased number and diversity of actors involved – resulted in improved outcomes through increased diversity of thought, expertise, buy-in.
3. Though increased connection, improved synchronization between Partner Team systems pursuing Unity of Effort, Unified Action, and Unity of Command.

Figure 2.   Campaign Plan Omid Partner Team: January 2011

Source: Created by author.

Transcript text: This morning I will tell you about where *we've come from over the last 18 months* and give you a sense of where we are headed. Eighteen months ago, we wrote the first country-wide operational-level comprehensive campaign plan that included our Afghan partners. That combined team of both ISAF as well as the three security ministries--the minister of interior, the minister of defense, and the national director of security--all put that plan together. (Department of Defense 2011, 1)

Now, we just finished a review and update of that plan that we began last year. And there is *now expanded participation* in those planning efforts. So the *U.S.* and *U.K. embassies*, *other civilian players*; as well as, very, very, importantly, the *Afghan ministries--civilian ministries of the independent director of local governance* and the *minister of rural rehabilitation and development* also participated in that plan-- altogether helping to bring better coordinated effects to a common plan. (Department of Defense 2011, 3)

Analysis: January 2011 Campaign Plan
Omid Partner Team

1. Rodriguez describes the changing dynamics of the planning team for Campaign

Plan Omid in terms of actors and their connections.

2. Rodriguez describes significant expansion, from 2009 and 2011, of the partner

team involved in planning Campaign Plan Omid.

3. Rodriguez emphasizes, "expanded participation in those planning efforts." This

indicates both an increased number of actors and connections in Omid partner team

network.
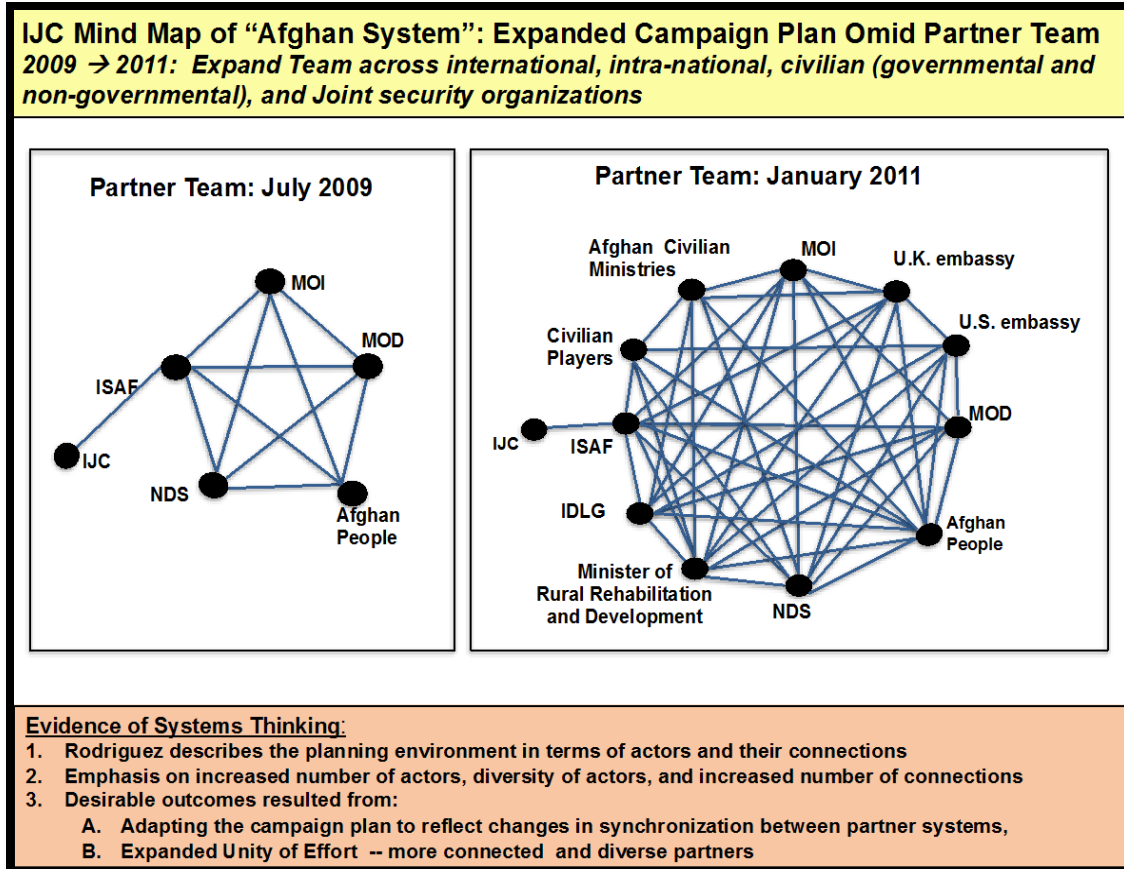
Figure 3.   Expanded Campaign Plan Omid Partner Team
2009 and 2011

Source: Created by author using data from Department of Defense, DOD News Briefing with Lt Gen Rodriguez from the Pentagon, News Transcript, February 1, 2011, http://www.defense.gov/ transcripts/transcript.aspx?TranscriptID=4764 (accessed October 15, 2012).

Analysis: Expanded Campaign Plan Omid
Partner (Planning) Team

1. Figure 3 combines the images of figures 1 and 2 to assist one in comparing the partner team networks of 2009 and 2011.

2. Rodriguez illustrates a visibly evident number of linkages connecting actors, and a stronger organization.

3. Network science examines the architectural structure of networks. The increased number of actors and connections indicates a structurally stronger network of relationships.

4. Rodriguez narrates that the increased number of actors and the types of actors (i.e. the Afghan civilian ministries of the independent director of local governance and the minister of rural rehabilitation and development) "helped to bring better coordinated effects to a common plan" (Department of Defense 2011). At the most basic level this indicates that he sees the environment in terms of actors and their linkages.

5. Rodriguez's 3rd Infantry Brigade Combat Team Commander, Colonel Toner, articulates similar themes in a U.S. Army Counterinsurgency Center's interview: "Continued realization of political primacy in internal operations is crucial to legitimizing governance. We found that integrating our provincial and district leaders into the planning and executing of our operations to be extremely useful to reinforce political primacy and enhance the legitimacy of the government" (U.S. Army Counterinsurgency Center 2012).

5.1 Like Rodriguez, Toner also maps actors and their connections when describing his operational environment. He illustrates:

> One of our key programs was our government 'outreach' program known as 1774. This brought the governors and the province line directors out to the districts to meet with the elders and/or conduct evaluations of the district governors/staff. All we did was provide transportation and worked with the ANSF [Afghan National Security Force] leaders for security of the governmental leaders. This program was hugely successful and popular with the people—in fact the governors started to invite parliamentary leaders from Kabul to participate. This outreach enhanced the credibility and stature of the provincial governmental leaders and often enabled them to solve security based problem.

> Finally, after bolstering the key aspects of the state, we used agriculture and economic development to deny the insurgents the base of discontented and

disenfranchised people to support his efforts–this was necessarily done 'by, with, and through' GIRoA, as progress in these areas served as the most tangible proof that GIRoA was on its way to becoming a government in both word and deed. Our great State Department and other civilian representatives supported these efforts. I continued the 'Board of Directors' concept and sat with the DOS, USAID**,** and USDA senior representatives on the Brigade BOD.

Like Rodriguez, Toner emphasizes the value of diverse actors working for a unity of effort.
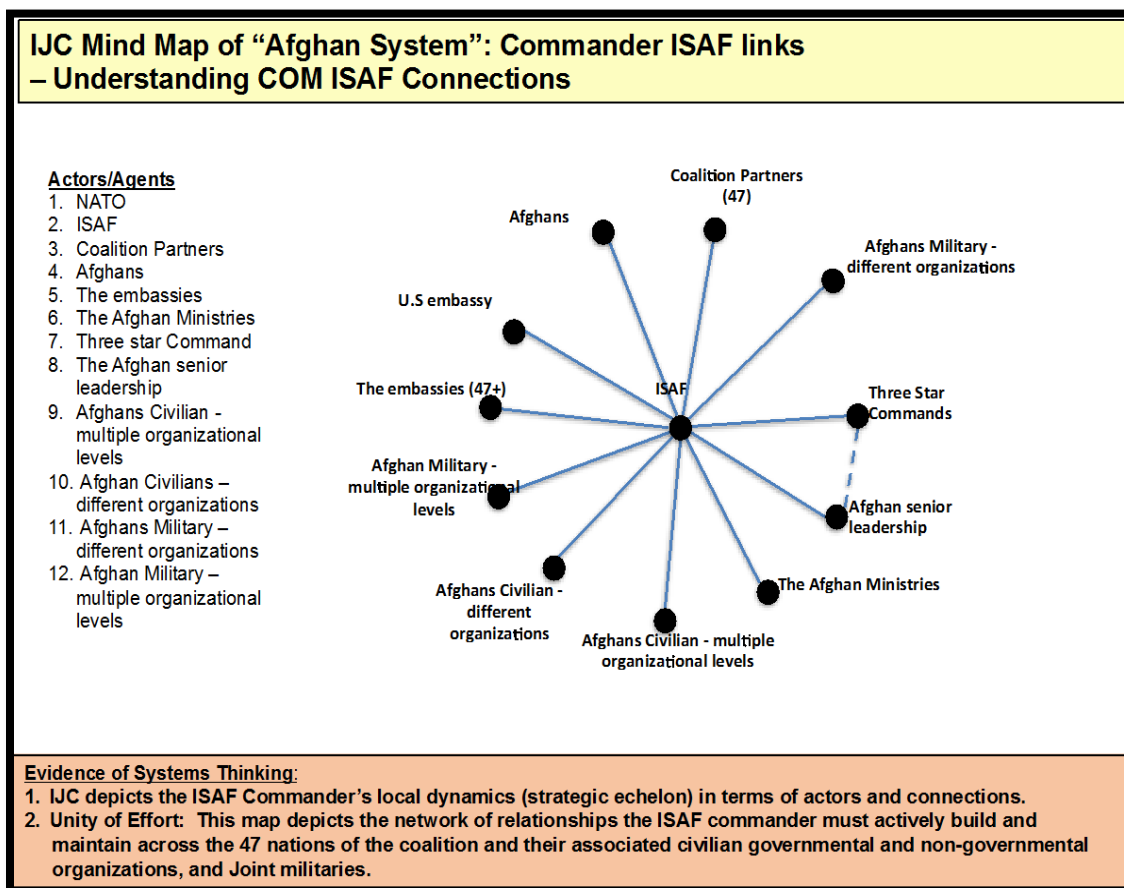
Figure 4.   Commander ISAF Connections

Analysis: Commander ISAF Linkages

1. Rodriguez continues to describe each portion of the Afghan System, and his operational environment, in terms of actors and connections.

2. While many of the connections he describes here overlap with the partners listed in figures 1, 2, and 3 (Campaign Plan Omid), here Rodriguez focuses on the relationships the ISAF Commander must maintain and build as a function of his role as the ISAF commander (Rodriguez 2011c), as opposed to his role as a lead planning partner.

The figure contains the following text:

IJC Mind Map of "Afghan System": ISAF, IJC, Regional Command Linkages
Mission: Build Unity of Effort via connections IOT defeat enemies of the Afghan People

Actors/Agents
1. IJC
2. RC East
3. ISAF
4. Afghan Natl. Security Forces (ANSF)
5. Central Ministries
6. Minister of Interior (MOI)
7. Minister of Defense (MOD)
8. Natl. Directorate of Security
9. Natl. Military Cmd. Center (NMCC)
10. Natl. Cmd. Coord. Center (NCCC)
11. Natl. Police Coord. Ctr. (NPCC)
12. (ANA) Corps
13. (ANA) Brigade (provincial level)
14. (ANA) Kandak (district level)
15. Afghan National Army (ANA)
16. Provincial government
17. Independent Dir. of Local Govt. (IDLG)
18. Police Zones (Border)
19. OCC Structure (6 Regional, 31 Provincial)
20. Corps headquarters (regional ANA)
21. Police Zone Command
22. District government
23. Pakistan
24. SOF
25. CSTC-A
26. TF 435
27. ISAF Regional Commands (RC)
28. Coalition Partners and Embassies

Evidence of Systems Thinking:
1. IJC maps the actors and connections he sees at each organizational echelon.
2. Rodriguez describes the connections expects Regional Commanders to build and maintain within and between partner organizational echelons.
3. Rodriguez articulates mission success as dependant upon expanding the number of friendly actors, the number of connections, and the strength of the connections in friendly networks.

Figure 5.   Linkages: ISAF, IJC, Regional Commands

Source: David M. Rodriguez, Voices from the Field Keynote Address: An Update from Afghanistan 2011, http://www.cnas.org/node/6539 (accessed December 7, 2012); David M. Rodriguez, "The Operational Environment" (Power Point presentation, 2011), 2, 3; Department of Defense, DOD News Briefing with Lt Gen Rodriguez from the Pentagon, News Transcript, February 1, 2011, http://www.defense.gov/ transcripts/transcript.aspx?TranscriptID=4764 (accessed October 15, 2012).

Analysis: ISAF, IJC, and Regional Command Linkages

1. Rodriguez maps the actors and connections for ISAF Commander, himself—IJC, and his Regional Commanders.

2. He outlines how he expects commanders to: (1) connect into partner organizational structures (civilian, military, and police); (2) connect different echelons of partner organizations to each other (Army to Corps, provincial to district, etc); (3)

connect different partner organization*s* to each other (Army to police, police to government); (4) connect to partners outside the Afghan System (echelons and agents of the Pakistan System); and (5) connect within the ISAF organizational structure (ISAF Regional Commands, IJC, subordinate commands).

3. In describing the mission of building connections, IJC Commander Rodriguez illustrates that he understands his commander, his own, and his subordinates' operational environments, in terms of complex systems influenced by interwoven networks of people acting within a range of arenas depictable as nodes and linkages.

4. Each echelon of the ISAF structure has its own set interacting systems, that link and overlap with other ISAF organizational echelons.

4.a Though each Regional Command and its subordinate commanders operate at the tactical organizational echelon, its networks cross all boundaries of society. The actors that comprise each Regional Command influence the Afghan System and feedback into the success or failure of mission objectives. Rodriguez describes:

> [C]ommanders out there on the ground have to make decisions every day about how to allocate their precious resources of time and effort. They must ensure the proper weighting between taking a fight to the enemy and strengthening communities by building the capacity and connection of that good government to the reliable security forces and to the people. And this trinity results in a trinity of popular mobilization, and it works. (Rodriguez 2011e, 4)

Here, Rodriguez again links commanders to communities, government, security forces and to the people. Separately, he links those commanders to the enemy (kill, capture) as a separate system of interactions. Summarily, Rodriguez connects these multiple networks of people through the commanders and the choices they make, which feed back into the Afghan System and mission success or failure.

4b. Within Rodriguez's mental model, not only strategic leaders, but also operational and tactical leaders must think of their environment in terms of actors (internal and unified action partners) and their connections.

4c. One of Rodriguez's tactical commanders holds a similar perspective. This Squadron Commander describes his visualization of the operational environment:

> [I]f we are accomplishing the first two key tasks of security and partnership, we are separating; if we are accomplishing the second and third key tasks of partnership and governance, we are connecting; and if we were accomplishing the last two key tasks of governance and development, we're now transforming. (U.S. Army Counter Insurgency Center 2011, 9)

Indeed, via the short explanation, he articulates what he thinks of the enemy in terms of "separating" (diminished connection), and friendly systems (unified action partners working for security, partnership, governance, and development) in terms of "connecting."

4d. In discussing partnership, Rodriguez emphasizes "the importance of unity of effort, where there is not unity of command, . . . we have managed to guide the Afghan security forces to focus in the right places, and we have gained the support of civilian actors to direct their terrific people and programs" (Department of Defense 2011, 3).

4d. Rodriguez goes further in saying:

> [T]he best chance of stabilizing Afghanistan is to mobilize the people to demand the fulfillment of their modest requirements. Now, this is dependent on the connection of the good government to the reliable security forces and to the people. And when all three legs of that stool or of the trinity work together, from the bottom, with a little help from the top, we will squeeze out enough of the enemies of the Afghan people to build sufficient stability for Afghanistan in the future. (Rodriguez 2011e, 4)

Here, Rodriguez again indicates that mission success depends upon unified action partners actively building connections between actors.
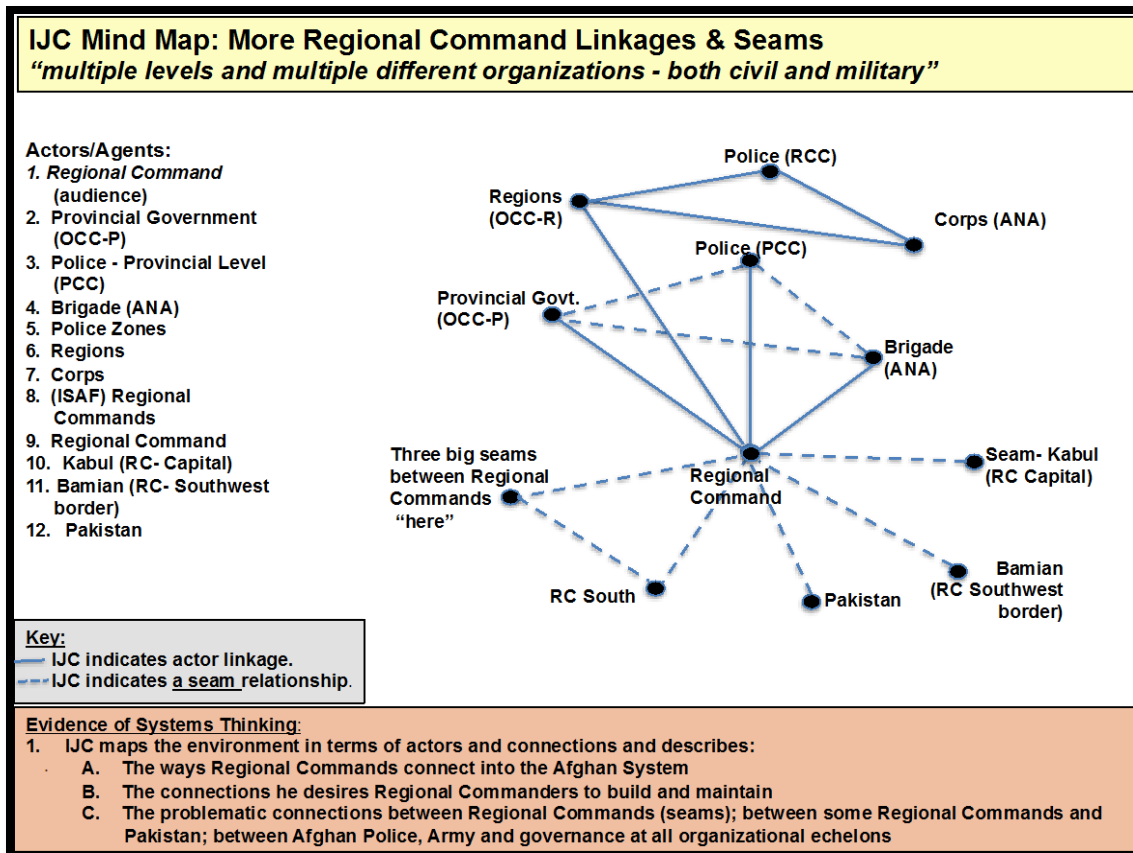
Figure 6. Linkages and Seams

Source: Created by author using data from David M. Rodriguez, International Security Force Asssistance Joint Command: Leadership Challenges and Imperatives, Command Brief Slides, April 2011; David M. Rodriguez, "Durable Enough to Withstand Challenges," The Afghan System, International Security Assistance Force Joint Command, April 2011, Unclassified command brief slides were provided to author by former IJC staff officer.

Analysis: Regional Command and Key Partners Seams

1. In figure 5, Rodriguez describes the Regional Commanders operational environment in terms of actors and connections.

2. Here, Rodriguez focuses on the seams in a Regional Command's operational environment.[19] Scaling in this manner adds granularity to the Commander' situational awareness and intent. Furthermore, it allows the staff officer or commander to understand specific combinations of actors, how they connect, and examine the context of the relationships in the specific arena.

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[19]Rodriguez commanded Regional Command East (2007-2008) prior to Commanding the International Security Assistance Force Joint Command (2009-2011).

Rodriguez Mind Map: Enemies of the Afghan People
"Insurgency, Poor Leadership, Criminal Patronage Networks & Bad International Practices"

Actors /Agents:
1. Insurgency
2. Parallel government
3. Infiltration Routes
4. Pakistan support bases
5. Armed Propaganda
6. Merciless Justice
7. Bad Intl. Community Practices
8. Imbalanced governance
9. Criminal Patronage Networks
10. Imbalanced development
11. Security Efforts
12. Inept, corrupt judicial officials
13. Poor Leadership
14. Inept, corrupt police
15. Afghan People
16. Provincial government
17. Legitimate government
18. District government

Direct relationships as described by IJC.
IJC indicates links

Evidence of Systems Thinking:
1. IJC maps enemies of the Afghan people and describes them in terms of agency and connections depictable via nodes & links
2. Rodriguez shows some agents as having multiple roles and linking into multiple networks - including friendly
3. IJC describes his over arching strategy as friendly networks grow while enemy networks shrink:
   A. Break or redirect the linkages and actors in enemy networks,
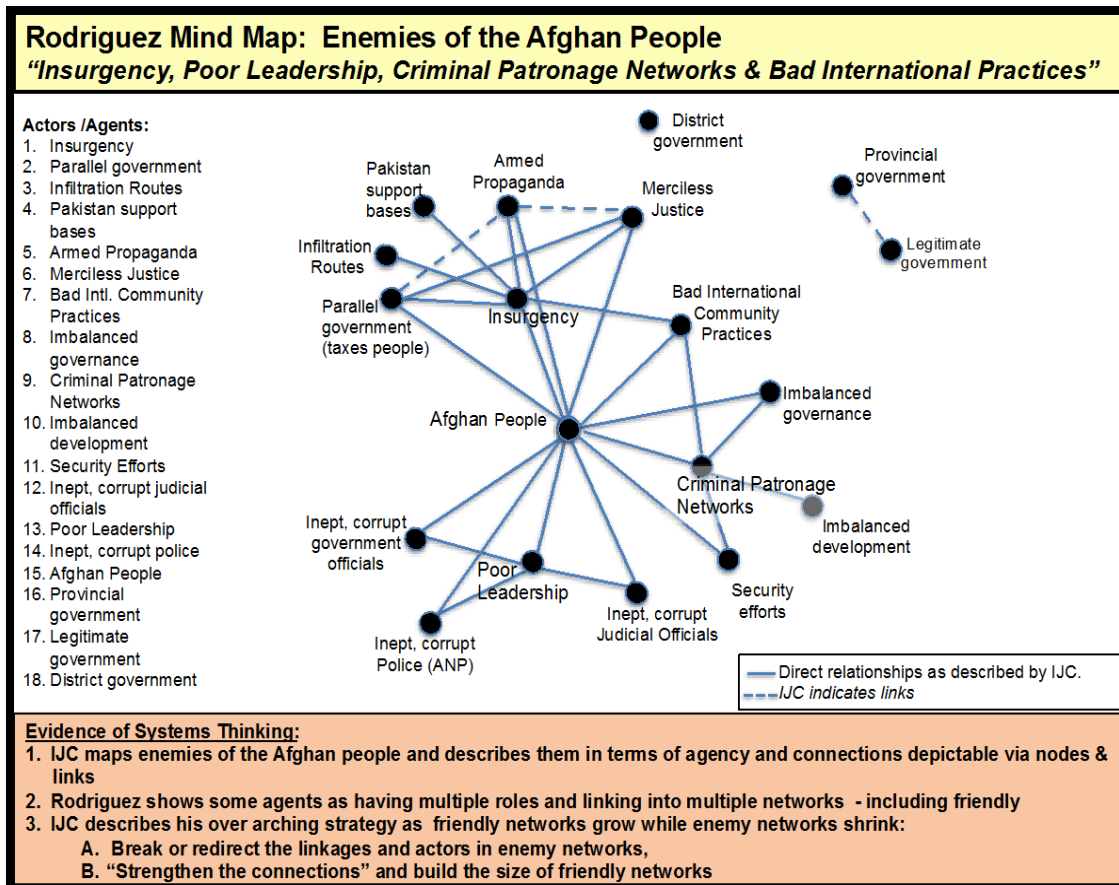   B. "Strengthen the connections" and build the size of friendly networks

Figure 7.   Enemies of the Afghan People

Source: Created by author.

Associated Text: (Enemies of the Afghan People) "*Insurgency* creates a wedge between the *government* and the *people* via *parallel hierarchies*, *armed propaganda*, and responsive but *merciless justice*. (It) utilizes sanctuary in *Pakistan* to coordinate attacks and undermine the GIRoA. *Poor Leadership* aggrieves the *population*; ineptitude and corruption manifest in *government officials*, *Afghan National Police*, and *judicial officials*. (It) erodes the trust of *Afghan*s through malfeasance and greed. *Criminal Patronage Networks* subvert legitimate governance and prey on the people. (They) thrive on the influx of poorly managed *aid dollars* and *imbalanced governance*, *development*, and *security efforts*. *Bad International Community Practices* alienate *people*, undermine *traditional leaders*, feed *malign actors* (and) *networks*, ignore economic conditions, fair prices and fair salaries at local levels. (They) weaken strategy and relationship(s) with Afghans through civilian casualties. (Rodriguez 2011c)

Analysis: Enemies of the Afghan People

1. Rodriguez maps enemies of the Afghan people and describes them in terms of

agency and connections depicted as nodes and links.

54

2. Rodriguez depicts some actors as maintaining multiple roles. These roles tie actors into multiple networks and may link enemy networks into friendly networks. Examples include: corrupt leader and Afghan National Police (ANP) Officer; Pakistan as a partner nation and–in ungoverned spaces–provider of insurgent sanctuary.

3. The IJC Commander describes part of his strategy as breaking or redirecting the linkages in the enemy networks, while partners "strengthen the connections" of friendly actors: A good example of this balance is Rodriguez's previous description of the choices commanders must make, between applying time and resources to "take the fight to the enemy" (Rodriguez 2011e, 4), and building the networks of actors and connections Rodriguez argues moves the Afghan System from insecurity to stability (Rodriguez 2011c).

3.a Drawing from some published interviews of Rodriguez's Division, Brigade Combat Team, Infantry Brigade Combat Team, Battalion, and Squadron Commanders, it appears as though many of his subordinate commanders interviewed, understand, articulate, and apply Rodriguez's mental model of the operational environment. A Marine at the Battalion Level discussed:

> Our battlefield is the Afghan people. We dominate our partnered AO through the support of the local populace, gained with positive interaction at every opportunity. These efforts include combat actions to defeat enemy forces, reconstruction efforts to mend the ravages of thirty years of war, and fostering governance and security to bring stability to our partnered AO. It mandates a deliberate link between combat operations and civil military operations, done by design in every operation. If we fail to own the population, then we give the enemy an endless source of recruits, sanctuary, and logistical support. If we succeed, we gain intelligence on the enemy, deny him sanctuary and support and limit his recruiting base. Do not underestimate the complexity of this battlefield. . . . Win the trust and confidence of the people; this is how we will force our enemies out of the AO. (U.S. Army Counter Insurgency Center 2011, 7)

This Marine, like Rodriguez, describes his operational environment and mission in terms of actors and their connections. Furthermore, he describes the feedback loops of positive and negative systemic interactions. He concludes that success in the area of operation rests on positive interaction with the local populations.

3b. Rodriguez's Commander of 3rd Infantry Brigade Combat Team, 1st Infantry Division, Colonel Toner, discusses that "the mission of 3-1ID IBCT was to execute a counterinsurgency strategy to separate the enemy from the population; achieve effects with the population through their security forces and government; and transform the environment into one where the enemy can no longer operate" (U.S. Army Counterinsurgency Center 2012).

4. Separating the enemy from the population diminishes or breaks the links between actors. Thus, the size of a network decreases. This idea ties into the Rodriguez mental model of increasing the size of friendly networks in terms of physical terrain occupied and number of actors, while simultaneously decreasing the enemy (social) networks structural and geographical size.

Figure 8.   Campaign Plan Omid, Operation Omid—Helmand River Valley

Source: Created by author.

Transcript text: Our first foray using this strategy was down in the central *Helmand River Valley*, a coordinated *civil-military* effort on both the *international community* and the *Afghan partners*. That's number one on your map. While there were almost immediate *security effects* through the partnered operations that we conducted there, the *Afghan*s, supported by the *international community*, of course, had a *tougher time building government capacity in the wake of the security* gains. (Department of Defense 2011, 1)

Analysis: Operation Omid Partner Team—Helmand 2009

1. Rodriguez describes the Operation Omid unified action partner team in terms of actors, their connections, and the outcomes of their interaction with the population of the Helmand River Valley (i.e. "tougher building government capacity in the wake of security gains").

57

2. Rodriguez identifies agents within the partner team as civilian, military, international, and Afghan.

3. Beyond the four identified systems that comprise the partner team in this vignette, Rodriguez identifies the security effect subsystem, the building government capacity subsystem, and the pre-existing Helmand River Valley system.

Next, the Partner Team began work to move Operation Omid to the next location, Kandahar.

IJC Mind Map of "Afghan System": Operation Omid Partner Team - Kandahar City
Synchronization of Unified Action: "Prepare government activities first"
Resequence interaction with the local population; Resynchronize internal systems

Actors/Agents:
1. Partner Team
   International Community
      a. Civilian
      b. Military
2. Afghan Partners (AP)
      a. Civilian
      b. Military
3. People and systems of Kandahar City and environs
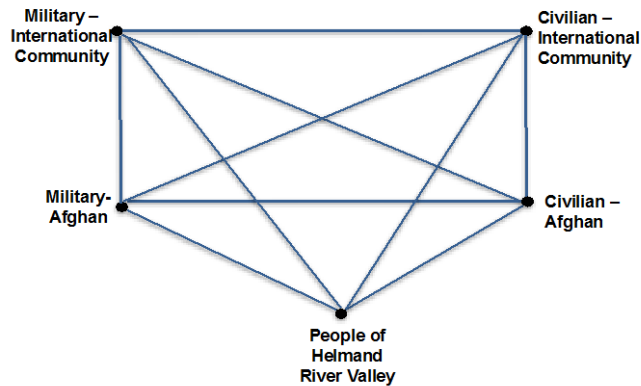
Military – International Community
Civilian – International Community
Military- Afghan
Civilian – Afghan
People of Kandahar City & Environs

Evidence of Systems Thinking:
1. Rodriguez describes the Kandahar City+ environment in terms of actors, their connections and the outcomes of re-sequencing both partner team internal interactions and partner team local (Kandahar) interaction.
2. Networks:
   A. Unity of Effort Partner Team: International Community(Civilian and Military); Afghan (Civilian and military)
   B. Partner Team security effects operations
   C. Partner Team – Build local governance capacity operations
   D. The pre-existing systems and subsystems of Kandahar City and environs (pre-Omid)

Figure 9.   Operation Omid Partner Team—Kandahar City
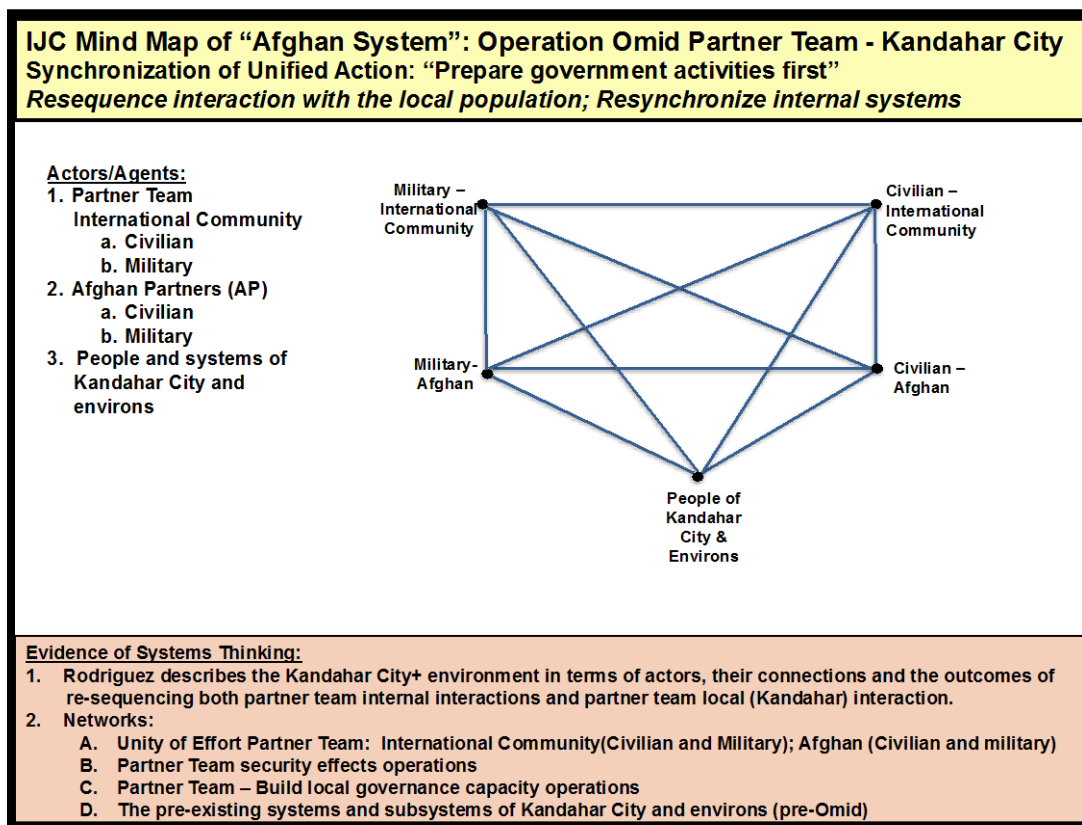
Source: Created by author.
Transcript Text: The *partnered team* learned some *significant lessons* during those operations that they were *able to apply* in the summer and fall of 2010 in *Kandahar City* and its environs. . . . Several of these lessons included the need for prior planning *to prepare government activities in advance*. (Department of Defense 2011).

<u>Analysis: Operation Omid Partner Team</u>
<u>Kandahar City 2010</u>

1. Rodriguez describes the Operation Omid unified action partner team in terms of actors, their connections, and the outcomes of their interaction with the population of Kandahar City.

2. Because Rodriguez identifies the security effect subsystem, the building government capacity subsystem, and the pre-existing local system, he has a means of thinking about how these systems interact internal to the Operation Omid partner team, and the sequence that they interact with the pre-existing local system—Helmand River Valley now, Kandahar. Rodriguez pursues this line of thinking into experimental intervention such that when the operational partner team moves to its next location (Kandahar City, 2010), the "security effect subsystem" is resynchronized (internal stabilizing of subsystems) with the "building governmental capacity system in an attempt to mitigate 'the wake of security effects.'"

3. In a separate speech (CNAS), Rodriguez illustrates:

> With regard to sequencing and prioritizing the lines of operation that the plan has made very, very explicit–as plans always intend to do–it has attempted to correct some of the challenges of the past, some practices that actually made the situation worse. . . . Now we're much better off. We spend the bulk of our military effort on degrading or destroying insurgent infrastructure to include the leadership. But we also ensured that the planning of local security and good governance begins early enough to be inserted and follow on as soon as the conditions allow (Rodriguez 2011e, 4).

Here Rodriguez highlights that the interactions of the security, governance, and local systems are not a linear process of forward advance, despite some efforts to make them so. First, prepare: build connections with local actors to plan local security and good governance. Second, insert actions and "follow on as soon as conditions allow." What

Rodriguez portrays above, is neither clear nor precise. Instead, as he indicates, it is a

messy, imbricating Clauswitzian triangle of complex governance, popular, and security
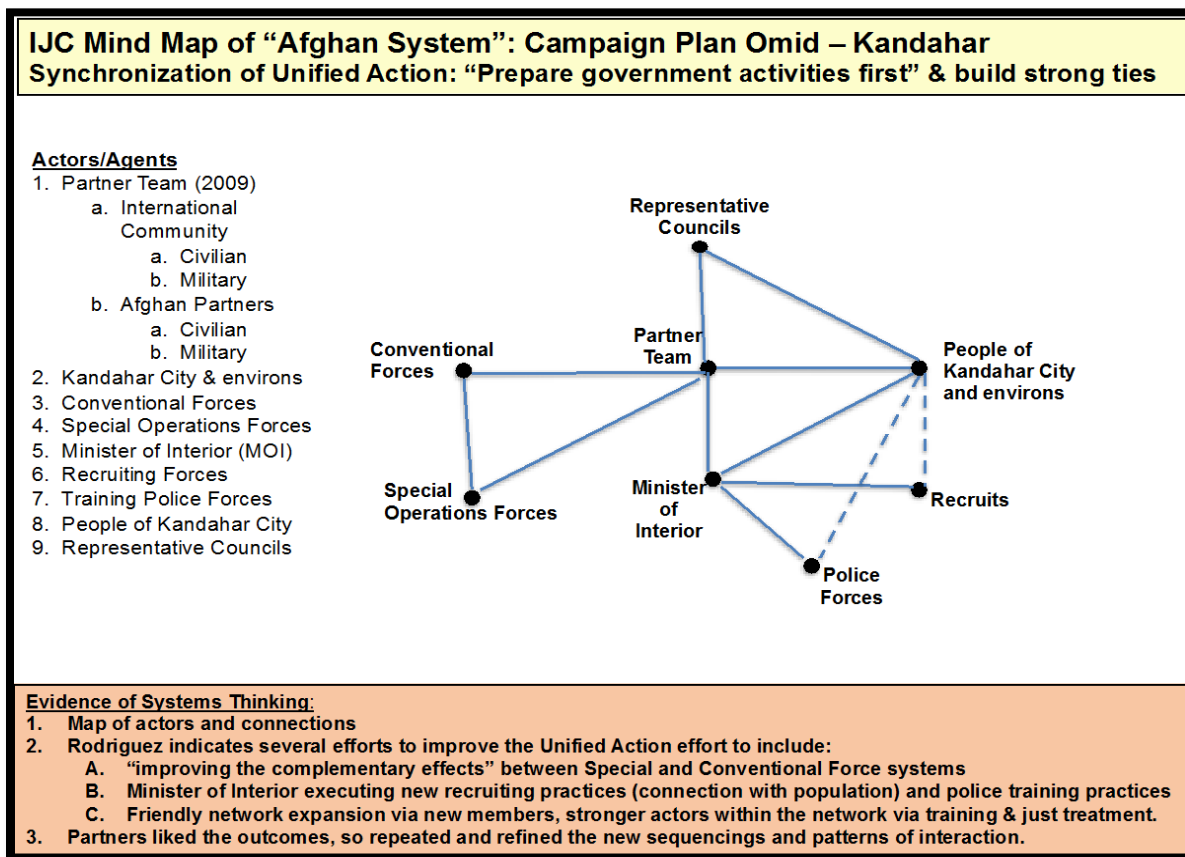
systems (Rodriguez 2011 c, 3).

Figure 10.   Synchronization of Unified Action: Prepare Government Activities first!

Source: Created by author using data from Department of Defense, DOD News Briefing with Lt Gen
Rodriguez from the Pentagon, News Transcript, February 1, 2011, http://www.defense.gov/transcripts/
transcript.aspx?TranscriptID=4764 (accessed October 15, 2012).

The partnered team learned some significant lessons during those operations that they were able to apply in
the summer and fall of 2010 in Kandahar City and its environs. And that's number two on your map.
Several of these lessons included the need for prior planning to prepare government activities in advance.
We all had to improve the complementary effects of the *conventional* and *special operations forces*. The
minister of interior learned some lessons *on recruiting* and training *police forces*, which were much more
effective in the follow-on operations. And we all learned that building *local political bodies* that represent
the people is an iterative process. And if more and more *people* are mobilized, the *representative councils*
become more representative and more effective.

Analysis: From Helmand (2009) to Kandahar (2010)

1. Rodriguez describes the Operation Omid–Kandahar environment in terms of actors, their connections, and the outcomes of their interactions with the population of Kandahar City.

2. Rodriguez indicates several efforts to improve the unified action efforts to include: (1) "improving the complementary effects" between Special and Conventional Force systems; (2) the Minister of Interior engaged in new recruiting practices (connection with population) and police training practices; (3) friendly networks expand via new members; and (4) actors within the network become stronger via training.

3. Rodriguez's narratives that accompany figures 8, 9, and 10, collectively depict the need for revised sequencing between the partner team's "security effect" system and the "build local governance" system.

4. Each of the partner team's systems includes subsystems (security effects, building governance, rule of law etc.) layered with subsystems (special operations forces and conventional forces, air and land forces, ANP and Afghan National Army (ANA) etc.) with discreet networks of people, each having its own punctual time, that must be synchronized within the larger partner team system. In such a situation, one might find it useful to apply Perez's Modified Institutional Analysis Development Framework (Perez 2011b), or Whitfield's Intelligence Fusion Paradigm (Whitfield, 2012).

5. The partner team systems and local systems each have their own internal speeds at which things happen. When the internal systems interact with each other and

the "new" local system, the commander has the opportunity to reflect on the interactions and outcomes, and plan his next action (experimental intervention).[20]

6. In the text associated with figure 10, Rodriguez describes a positive feedback loop that he and the partner team began to understand through their experimental intervention in Kandahar City: "we all learned that building local political bodies that represent the people is an iterative process. And if more and more people are mobilized, the representative councils become more representative and more effective" (Department of Defense 2011).

The final map shows a progression from an unstable environment and corelary absence of positive connections (Arghandab 2009), to a percieved stable environment with a corollary increase in connected friendly actors, filling governance and security roles.

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[20]There were many other efforts going on in other areas that still had the initial sequencing. Once each localized engagement had begun and the systems collided, the "wake of the security gains" could not be removed.

IJC Mind Map of "Afghan System": Operation Omid – Arghandab
2009 Absence of Friendly Actors & Connections → 2011 Actors, Connections & Stable Environment

"18 months ago" (July 2009):
Positive roles empty - connections absent

"Two weeks ago" (Jan 2011): Friendly disconnects
Enemy from People & build positive network

No police present

Taliban Stronghold

Police Chief maimed

People of Arghandab

District Governor killed

No government officials present

District center "combat outpost"

Kandahar City

Partner Team

New Police Chief

New District Governor

People of Arghandab

Police Force ("out and about")

16 government employees

Military - International Community

Civilian Afghan

IJC

Partner Team

Military Afghan

Civilian-- International Community

Evidence of Systems Thinking:
1. Rodriguez describes the Arghandab environment in terms of actors and their connections.
2. Rodriguez illustrates the *absence* of friendly actors and connections.
3. Rodriguez shows improved OE via Unified Action, new connections and friendly actors in previously empty roles.
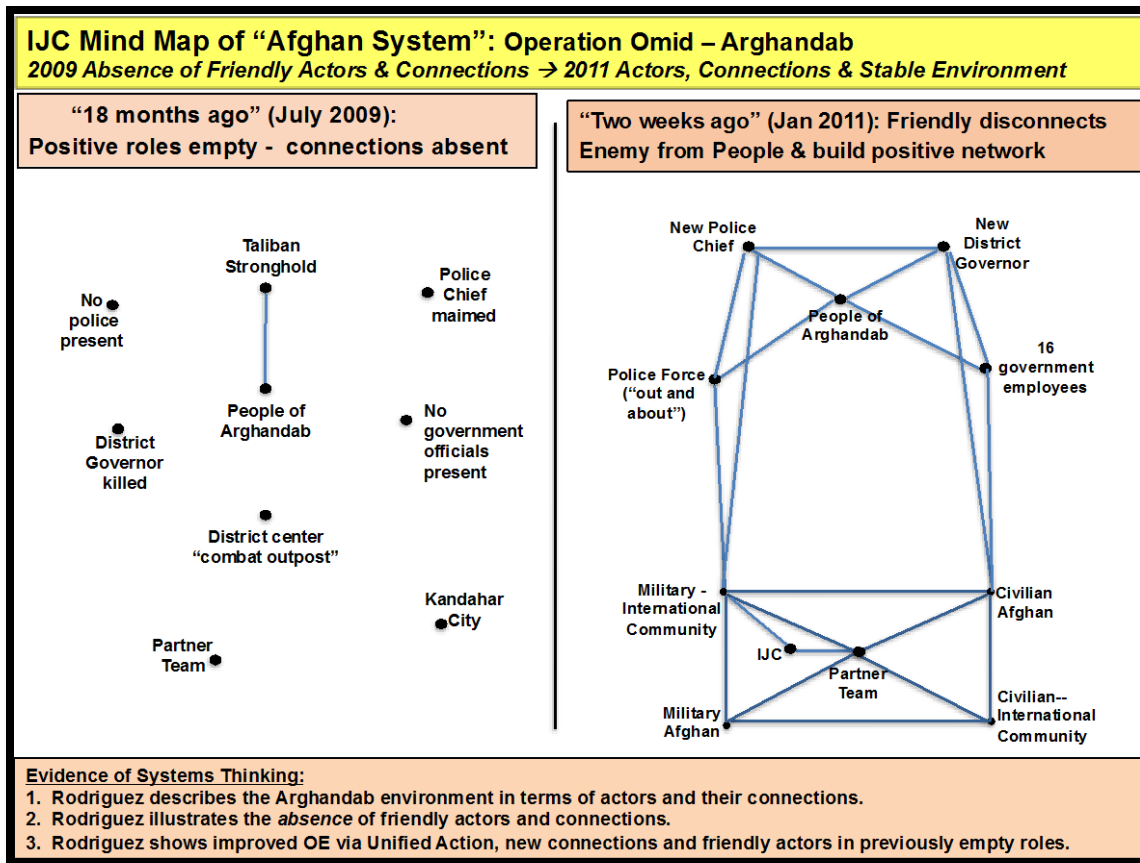
Figure 11.   Operational Omid—Arghandab

Source: Created by author using data from Department of Defense, DOD News Briefing with Lt Gen Rodriguez from the Pentagon, News Transcript, February 1, 2011, http://www.defense.gov/transcripts/ transcript.aspx?TranscriptID=4764 (accessed October 15, 2012).

Transcript text: So now in *Arghandab*—a district just outside Kandahar City that you know has been a tough place since the first time we really went in there and stayed, beginning in July 2009, was a Taliban stronghold, and people could not move around without fear. In that *18-month period*, the *district governor was killed*, the *district police chief* was maimed, and there were *no government officials or police present* any place with—but the district center, which some of the Afghans described as a combat outpost.

I was there two weeks ago, and there were *16 government employees* working with a new district governor. There's a new police chief who has a police force that's out and about. And the people on a Friday afternoon, Afghan family time, were out picnicking in the Arghandab River Valley—a significant change from 18 months ago.

Analysis: Arghandab Transformation

1. Rodriguez describes the Operation Omid Arghandab environment—and the impact the unified action partner team had moving from 2009 to 2011—in terms of actors and their connections.

2. Rodriguez describes the dynamics that influence the absence of desirable actors and connections to include limitation of movement, and absence of legitimate actors to connect with.

3. In the absence of positive connections, Rodriguez maps the roles actors should fill.

4. Rodriguez consistently maps organizational echelons of civilian and security force actors within the environment.

Summary of Research Analysis

1. Lieutenant General Rodriguez describes the overarching operational environment as "The Afghan System."

2. Rodriguez describes the Afghans system by scaling it down into a series of interwoven mapable contexts, openly bounded by the actors, agents, and systems identified within that context.

3. Within each area of operations, Rodriguez maps how the actors, agents, and systems connect to each other. These maps of actors and connections create pictures of networks, as described by Rodriguez.

4. While many of his narratives describe the ways (the patterns of behavior and/or causality) one actor or system interacts, influences, or feeds others—"connections," as

mapped in this research, simply represent Rodriguez's mental model of nodes and linkages.

5. Within some areas of operation, Rodriguez not only focuses on how actors are, or were connected, but also examines how they are, or were not connected.

6. Rodriguez provides many examples of changes in how actors are connected (the size and structure of a social network) over time. He includes both tie based, and geographically based networks when examining change.

7. Rodriguez indicates that tie based and geographically based networks are fertile fighting ground between the unified action partners and the enemies of the Afghan people systems.

7.1 Both of these systems overlap and intertwine, as they share human and geographical terrain, sometimes the same actors, and even similar strategies. In fact, Rodriguez points out that "Insurgents now target those things and people that threaten control over the people: government officials, police stations, and elders of representative community councils" (Rodriguez 2011b). Additionally, Rodriguez shows that he believes that the enemy also sees mission success in terms of their connection with (control of) the Afghan people. In both his speeches and written publications, Rodriguez often describes the enemy as getting between the legitimate government (particularly at the provincial, district, and local level) and the people. Rodriguez sees the Afghan System as a fight for actors and connections.

8. Rodriguez describes the underpinnings of Campaign Plan Omid, as a balance of time and efforts focused between building friendly networks and dismantling enemy network infrastructure.

8.1 Rodriguez leads partners to expand and strengthen friendly networks by: (1) increasing the number of actors; (2) constructing connections between actors where they should exist but don't (regional, provincial, district, local governance); and (3) maintaining and strengthening existing connections between actors (i.e. between interior echelons of the ANA and ANP; between the ANA, ANP and governance at each echelon).

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echelons of the ANA and ANP; between the ANA, ANP and governance at each echelon).

8.2 Rodriguez works to expand the number of connections in the network by increasing the number of people tied within a network (structural expansion), and expand the geographical terrain that the actors in the network exist upon (physical expansion).[21]

8.3 Through unity of effort, Rodriguez guides unified action partners and his subordinate commanders to: (1) decrease the number of actors within enemy systems; (2) weaken and destroy connections between enemy actors that provide access to resources, power, money, authority, and/or people; (3) isolate enemy actors by destroying their linkages; and (4) envelop[22] enemy actors so that they leave the enemy and join friendly networks.

8.4 Moreover, Rodriguez works to reduce the number of enemy network connections by decreasing the numbers of people tied within a network (structural shrinkage) and the geographical terrain that the actors in the network exist upon (physical shrinkage).

9. The networks Rodriguez describes from one organizational echelon, or operational area, to the next are not the same. Each map incorporates some of the same

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[21]The first, all networks (depicted by nodes and links) maintain an architectural structure. Christakis argues that understanding the type of tie a helps a researcher understand the spread of 'social contagions' within systems (Christakis 2010). Second, humans live on terrain. When a group or nation conquers terrain, either by force or influence, the individuals that live on that terrain (who have their own preexisting networks) now must choose to join, fight or run from the invading network. In this way, the network is physically expanding, as well as structurally expanding.

[22]Envelop the actor by recruiting him into the friendly framework. This sometimes works when the person can be isolated from the enemy and incorporated into the friendly system.

actors and connections, but never all. Also, the structure of a network changes when the ties that bind two or more actors change.

9.1 Rodriguez appears to spend considerable effort conveying this idea by the way he structures his speeches (i.e. the initial identification of actors and context upon which he builds layers of additional networks of actors interwoven in the environment; and by his emphasis on the multiple roles and associated networks individuals maintain).

9.2 Counter to common Army cultural narratives and military Doctrine, Rodriguez spends a significant portion of his speeches emphasizing, mapping, and describing friendly systems, networks, and actors.

10. The majority of actors, connections, and relationships discussed describe the connections between unified action partners, scaled through multiple organizational echelons and across physical terrain (Helmand, Kandahar, etc.). Rodriguez examines how multiple systems of friendly and neutral actors connect. He often points out the need to synchronize (stabilize) two or more interacting systems, and sequence (via shaping) multiple systems' order of interaction. Thus Rodriguez uses key systems theory ideas as he works to influence complex, interwoven networks of interacting people.

11. Rodriguez consistently describes the feedback loops created through international community bad practices, through the fight between the enemy and the partners over the population, and through the effects of policy decisions that impact tactical operations and Afghan trust.

12. Rodriguez sees complex systems as adapting to the absence or failure of a part. There is no one leader or COG that the partner team can destroy or degrade and

achieve mission success.[23] Again, Rodriguez models complex systems thinking when he leads others to sever a network's connections, rather than destroy a leader.

12.1 Rodriguez looks at "weak communities" as opportunities to create positive feedback loops of good leaders, popular mobilization, representative local governance, good local police, and all feeding back into strong communities (Department of Defense 2011; Rodriguez 2011e).

13. Rodriguez consistently lays out causality in the narratives as he maps the actors, agents, and systems.

14. Rodriguez not only lays out causality, but he describes the effects of both systemic causality (inclusive of Parson's typology) and emergence. For example, when discussing the enemy of "bad international practices" he describes systems of perverse incentives (institutional systemic causality) (Rodriguez 2011b). When asked at the Pentagon Brief whether he thinks he can achieve mission success without the support of Pakistan, he answers by listing three interacting systems within the Afghan System and essentially saying he could succeed, unless he can't (Rodriguez 2011a; Department of Defense 2011, 4). He and his partner systems have a plan (experimental intervention Omid) but he cannot account for emergence.

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[23]In reference, a complicated system or system of systems is a collection of task oriented or dedicated systems that pool their resources and capabilities to create a new more complicated system (Popper et al. 2004). Of note, "system of systems" *as a term* could well describe a system or environment comprised of a myriad of complex systems– but the definition does not.

Living systems (social systems included) are complex systems where the 'parts' have multiple roles and functions and actively take part in multiple discrete networks within the same system *at conditions or tipping points may keep them from adapting*.

15. Staff planners and strategist should map their commander's speeches and publications to determine how he sees actors and their connections in the operational environment. Staffs should explore how partners, as well as enemies, connect. Additionally, such an exercise helps the Staff Officer better support the commander's understanding of the complex social systems interacting within his environment, and the commander's visualization of how he should apportions and apply his resources to best intervene.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This analysis of Rodriguez's spoken and written words reveals that one of the top level serving, combat proven commanders, thinks and describes his thinking in terms of a series of interrelated stakeholder interactions, depicted by nodes and linkages. It also uncovers that Rodriguez uses systems based experimental intervention; identifies and understands feedback loops; perceives that discrete systems move in time at their own pace; seeks to synchronize internal systems, and shape the sequence partner systems interact with local systems. Furthermore, it illustrates that the organizational echelon at which a person serves may determine his proximate context, but does not limit his network; that Rodriguez and his commanders do not limit the concept of the enemy to humans or armies, but instead see enemies as systems or actors with opposing agency; and that actors and agents simultaneously maintain numerous roles, each with its own associated networks and causal linkages.

The International Security Assistance Force Joint Commander views mission success (stability) in terms of strong connections, and mission failure (instability) in terms of weak connections, between friendly and neutral actors and organizations (International Security Assistance Force Joint Command 2011). This finding is reinforced by USARPAC Commander Wiercinski's speech to Command and General Staff College students. During this speech and in a subsequently published article the General emphasized the idea that building and maintaining relationships is the key to all other

mission objectives (Wiercinski 2012). Clearly, Army leadership has been thinking about the importance of building and maintaining relationships for strategic and tactical benefit.

ISAF Joint Commander understands, visualizes, and describes the "enemies of the Afghan People" as networks, agents within systems. He does not articulate these systems concepts via a lexicon of systems language, but instead through identifying the actors and agents, how they link, what drives their motivation, their narratives as he understands them, the perverse incentives the interactions cause, and the feedback loops of "bad practices" (Rodriguez 2011a; Rodriguez 2011b; Rodriguez 2011c; Rodriguez 2011d; Rodriguez 2011e;). Rodriguez shows that defeating these enemies depends on destroying or redirecting the network of actors and linkages (relationships). Concurrently, he argues, the connections of actors within friendly networks must be built and strengthened. Ultimately, Rodriguez sees the Afghan System as a battle between unified action partners and enemies of the Afghan people, over actors and connections.

Via experimental intervention in executing Operation Omid with his partner team, Rodriguez found that his Afghan and international community partners "had a tougher time building government capacity in the wake of security gains" (Department of Defense 2011). Subsequently, Rodriguez describes the partner teams's efforts to mitigate the wake. Of profound importance was "the need for prior planning to prepare governement activities in advance." Nuance is important here. Rodriguez continues to argue that security is needed—which includes capturing and killing insurgents—but also argues for "a bottom-up approach founded on good governance, capable security forces, and engagement with local communities" followed by securing key terrain while the coalition's civilian counterparts support "the strategy by concentrating their development

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programs in the key terrain that troops have cleared of insurgents." Finally, he points out

that the Coalition has made "preventing civilian casualties a top priority" and directed

Coalition Troops to apply "the precise application of violence" and to "let an insurgent

live to fight another day if the collateral damage from killing him would outweigh the

benefits" (Rodriguez 2011b).[24]

Pakistani Major General Aamer maintains that military operations are more

successful, when social and political support is built first, before the application of

violence (Aamer 2012).

It should give military scholars, practitioners, and doctrine writers considerable

pause when operational level commanders redesign their campaign plan and re-

orchestrate their "unity of effort" to pursue sociopolitical efforts prior to engaging in

security efforts. This matters. The two commanders referenced were from two different

countries (Pakistan and the U.S.), in two separate geographical arenas (Pakistan and

Afghanistan) linked by professional relationships (Commander Regional Command East,

Commander ISAF Joint Command, and Commander Pakistan Army Forces working in

the border region, Commander Pakistan Army in the Pakistan counterinsurgency

campaign), working within different networks of partners and interacting with separate

populations.

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[24]This application of force against an enemy flies in the face of Jomini's
Principles of War which demand absolute destruction of the enemy in retreat. JP 3-0 has
omitted this aspect of Jomini's Principles of War and further modified the Principles by
moderating them with Clausewitzian concepts (military operations support political
objectives) and the additional principles of Restraint, Perseverance, and Legitimacy (Joint
Chiefs of Staff, 2011a, A-3--A-4).

It is significant that these gentlemen both altered their operations in time and space from first, clear the area of "all enemy forces and eliminate organized resistance" (Headquarters, Department of the Army 2006, 5-19), to: "You must build the social and political environment first because without this, you create too much friction that you will never recover from"[25] (in that local environment). Major General Aamer gives his audience an example of that friction from a local person's perspective in saying "like it or not, my son is hurt. I don't care if you give me something or pay me." He continues from his own perspective "then, development is happening in an environment of friction." (Aamer 2012). Though counter to currrent doctrine, this finding makes sense in light of General (Ret) David Petraeus's comments of "We came to understand that human terrain was decisive terrain" and "It was really hard to sit down with peole who had our blood on their hands" (Petraeus 2012).

The process of mapping a commanding officer's speech is a valuable exercise. It takes time, but is well worth the insights one gains in the process.

The U.S. Army must decide how it views itself. Do the educators, doctrine writers, and general officers leading our educational institutions think that 95 percent of our officers, are lazy, stupid and/or in capable of learning? Or, should Army senior leadership assess that most of our officers, all with at minimum undergraduate degrees, have an ethos that drives them to want to be good leaders, have the capacity to learn and think in new ways, and will push themselves to learn new ideas if they see the value.

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[25]MG Aamer's narrative continued: "like it or not, my son is hurt. I don't care if you give me something or pay me . . . then, development is happening in an environment of friction" (Aamer 2012).

Design doctrine directs the practitioner to understand the conditions of our operational environment, decide what conditions we wish to achieve, and identify what (causality) is preventing us from getting there. Fundamentally, if our officer corps does not primarily consist of leaders willing and intellectually able to participate in complex thinking, we must understand and apply design to ourselves. If the Army determines that the majority of all officers do have a desirable ethos and capacity to learn, it should expect officers to perform better, if military education and doctrine provide the core concepts of systems thinking, a framework to organize, analyze and articulate thought, and an education that teaches the ways and value of understanding and applying the framework (Grotzer and Perkins 2000). It is not enough to include social networks in an untaught[26] appendix of FM 3-24—particularly when ADP, ADRP and JP 3-0 and 5-0 are seen as the underlying doctrine for all Joint and Army operations and operational planning.

Recommendations

1. Create or identify a typology of systems to include at a minimum: open systems, closed systems, complicated systems, and complex systems. Include in all levels of officer education. Include in Joint and ADPs 1-02, 3-0, and 5-0.

2. Use the language already developed by multidisciplinary systems and network theorists to articulate important concepts. Provide a glossary. Include—with a sufficient amount of time for students to absorb the information—in all levels of military education. Include in Joint and ADPs 3-0 and 5-0.

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[26]While SOF and other specialties may get this education, it is not part of any mainstream Army curriculum–and should be.

3. Create or identify a taxonomy of causality to be considered in various proximate contexts. This should include concepts of direct causality (President and Fellows of Harvard College 2005), systemic causality (Lakoff 2012) and emergence (Connolly 2011). It should also include; structural, institutional, psychological, and ideational causal dynamics (Parsons 2007). Causal logics should be taught in Enlisted and Officer education. Include in the body of Joint and ADPs 3-0 and 5-0.

3. Provide a framework that helps a practitioner to think about and analyze the social systems, collective action, and collective action problems in the operational environment. Include the framework and an explanation of how to apply it, in all levels of officer education, and in Joint and Army Doctrine.

4. Revaluate Joint and ADPs 3-0 and 5-0. Consider the material and critically evaluate if it is appropriate for all types of war, at all echelons of war. If the theory, framework, concept or principle only pertains to the tactical level of warfare and/or certain types of war, remove it from Joint and ADPs 3-0 and 5-0, and place it in the appropriate publication—i.e. ADP and ADRP 3-90 Offense and Defense (in Maneuver Warfare).

5. Revaluate Joint and ADPs 5-0 and 3-24. Further research is needed regarding the planning strategies of "Clear, Hold, Build" and the "Phasing Model" where forces deter, seize, dominate, stabilize, and enable the civil authority.

<u>For Further Study</u>

1. The U.S. Army Counterinsurgency Center compiles lessons learned from Operation Enduring Freedom and Operation Iraqi Freedom. One could expand the analysis done here to examine the understanding of the operational environment among

all echelons of commanders. Who sees the environment in terms of actors and their connections? Did such commanders serve under Rodriguez and learn to see through his Commander's Intent? If a commander doesn't see the environment in this way, how does he visualize it? Further, how do the outcomes of this research compare to Army narratives? Do Army narratives differ between branches?

2. Have other commanders in history also viewed the operational environment in terms of actors and their connections? Who? Which wars?

3. What new ways can the systems research of Barabasi, Christakis, and Connolly help the military practitioner better understand both the operational and friendly unified action environment?[27]

<center>Conclusion</center>

This research of Rodriguez's spoken and written word reveals that one of the top-level serving, combat proven commanders thinks and describes his thinking, in terms of a series of interrelated stakeholder interactions, depicted by nodes and linkages. It also reveals that Rodriguez uses systems based experimental intervention; identifies and understands feedback loops; perceives that discrete systems move in time at their own pace; seeks to synchronize internal systems and shape the sequence partner systems to

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[27]Barabasi mentions "neighborhoods of contagion" within the human body that are significantly similar to neighborhoods of grouped human activity within a city (art district, banking district, food district, etc) (Barabasi 2012). Christakis uses the mapping of human networks to study the movement of 'social contagions', epidemics, and trends in human behavior from a social systems perspective (Christakis 2010). Using Rodriguez's taxonomy of the enemies in the Afghan system could these (and friendly and partner networks) be mapped first via connection and second via specific types of ties? Would we perhaps better understand more about these networks and their structures? Would such work help us better understand how to interact and intervene in such an environement?

interact with local systems; illustrates that the organizational echelon at which a person serves may determine his proximate context, but does not limit his network; that Rodriguez and his commanders do not limit the concept of enemy to humans or armies, but instead see enemies as systems or actors with opposing agency; and that actors and agents simultaneously maintain numerous roles, each with its own associated networks and causal linkages.

This should give every officer who has served in Afghanistan under Rodriguez pause. Hundreds of thousands of American soldiers served in combat under this commander's intent, understanding, visualization, and description of the operational environment. Commander of the International Security Assistance Force Joint Command. Partner to every U.S. governmental and non-governmental agency acting in his area of interest. Aware of the laws, politics and global recession shaping the actions, force size, and civilian contingent of every non-American nation applying its economically strained resources within the operational environment.

Lieutenant General Rodriguez paints a clear picture of the operational environment, its actors, their relationships, and its interacting systems. He articulates the mission in terms of a battlefield where commanders must balance time and resources between building unified partner networks, and deconstructing enemies and their connections. Rodriguez cautions his partners and subordinates to carefully understand and apply behaviors, connections, interactions, and relationships to create positive outcomes and incorporate more people into legitimate systems. He warns that bad careless behavior, actions, and practices systemically feed and grow the enemy.

While Rodriguez is an N of 1, he has provided and continues to provide, his vision, leadership, intent and direction to hundreds of thousands of U.S. Army soldiers, and Joint military service members. Further, his efforts and thinking have influenced thousands of civilian national and international partners, international security force members, and the governments and security forces of Afghanistan. The implications for this research are significant for the soldiers, airmen, seamen, and marines who go to war and seek to understand complex operational environments filled with networks of actors and their connections.

Stabilization. The process by which underlying tensions that might lead to resurgence in violence and a breakdown in the law and order are managed and reduced, while efforts are made to support preconditions for successful long-term development. (FM 3-07)

Synchronization. The stabilization of the interactions between two or more systems in time and space.

Synchronization—(DOD). The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time (JP 2-0) See ADP 3-0 and ADRP 3-0.

Unified Action—(DOD). The synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort. (ADRP 3-0)

Unified Action Partners. Those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during the conduct of operations. (ADRP 3-0)

Unified Land Operations. How the Army seizes, retains, and exploits the initiative to gain and maintain a position or relative advantage in sustained land operations through simultaneous offensive, defensive, and stability operations in order to prevent or deter conflict, prevail in war, and create the conditions for favorable conflict resolution. (ADP 3-0)

Unity of Command—(DOD). The operation of all forces under a single responsible commander who has the requisite authority to direct and employ those forces in pursuit of a common purpose. (ADP 6-0)

Unity of Effort—(DOD). Coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization—the product of successful unified action.

Wide Area Security. The application of the elements of combat power in unified action to protect populations, forces, infrastructure, and activities; to deny the enemy positions of advantage; and to consolidate gains in order to retain the initiative. (ADP 3-0)

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